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This Cooperative Language Development Project had two objectives: (1) to provide a modified language program for culturally disadvantaged first graders and (2) to evaluate the effectiveness of the program in terms of academic, intellectual, and linguistic growth. In a 2-year intervention program experimental versions of the Peabody Language Development Kit (PLDK) and the Early-to-Read Initial Teaching Alphabet (ITA) were used for an experimental group. There were 630 subjects the first year and 343 the second year. A conventional basal reading program with no language stimulation was used for a control group with 102 subjects the first year and 41 the second year. The combination of ITA and 2 years of PLDK produced the most effective results. Reading achievement after 2 years was equal for both groups. The effects of PLDK on intellectual functioning are questionable. These findings must be viewed cautiously since (1) increments favoring the ITA and PLDK may not last through the third grade, and (2) present research does not suggest the same superiority of ITA as demonstrated in this project. However, ITA and PLDK hold promise for inner-city slum children with reduced verbal ability, restricted and nonstandard English, and inability to articulate speech sounds clearly. (DO)

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INSTITUTE ON MENTAL RETARDATION AND INTELLECTUAL DEVELOPMENT
A UNIT OF THE
John F. Kennedy Center for Research on Education and Human Development
GEORGE PEABODY COLLEGE FOR TEACHERS/NASHVILLE, TENNESSEE 37203

IMRID Behavioral Science Monograph No. 6

THE EFFECTIVENESS OF THE PEABODY LANGUAGE DEVELOPMENT KITS AND THE INITIAL TEACHING ALPHABET WITH DISADVANTAGED CHILDREN IN THE PRIMARY GRADES: AFTER TWO YEARS

by

Lloyd M. Dunn, Ph.D., Prayot Pochanart, M.A.,
and Philip Pfost, Ed.D.

1967

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Nashville, Tennessee
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PREFACE

The Cooperative Language Development Project reported upon in this monograph is a dual purpose project initiated by the Institute on Mental Retardation and Intellectual Development (IMRID). The project was designed to provide a modified language arts program for a substantial number of culturally disadvantaged first grade children, and to evaluate the effectiveness of the program in terms of the academic, intellectual, and linguistic growth of the participants. Modifications of the usual primary grade curriculum involved use of the Peabody Language Development Kit (PLDK) and the Initial Teaching Alphabet (ITA). The use of the PLDK will be continued on an experimental basis through the third grade. The experimental reading program will also be continued through the third grade, though it is anticipated that virtually all children will have made the transition from ITA into traditional orthography before the end of the third grade. The final phase of the project will involve a continuing evaluation of experimental subjects through the fourth grade.

The purpose of this monograph is to report the results of the Cooperative Language Development Project after two years of intervention. The children had completed the second grade at this time.

This project was initiated by IMRID, a unit of the John F. Kennedy Center for Research on Education and Human Development at George Peabody College for Teachers. It was carried out in cooperation with the Nashville-Davidson County Metropolitan Schools and the Nashville Educational Improvement Project. Financial support for the research aspects of this project was provided through IMRID by funds from the National Institute of Child Health and Human Development under Grant No. HD-973. Service aspects of the project were supported by the Nashville Educational Improvement Project from Ford Foundation grant funds.

A great number of people have contributed to the success of this project to date. The authors are indebted to Mrs. Carrie Denny, Supervisor in the Nashville-Davidson County Public Schools, for her assistance in the project. Special acknowledgments are due M. D. Neely, Metro Supervisor of Elementary Education, who was the main force in the school system behind the conception and execution of this experiment. Mr. N. A. Crippens also deserves special recognition. As Director of the Nashville Educational Improvement Project, he was not only primarily responsible for provision of financial support, but also a major source of professional support and coordination with related research activities in Nashville.

We particularly wish to acknowledge the contribution of the large number of persons directly involved in the conduct of the project. The teachers involved in the project deserve a great deal of credit for the success of the project as do their principals. A special note should be made of the contribution of teachers and principals in control schools who endured many of the inconveniences of the project participation without the stimulation of an experimental program. In addition to these regular school personnel, recognition is due the special personnel involved in the project. We appreciate the efforts of the visiting teachers and community volunteers who added so much to the PLDK program. Finally, recognition is due the examiners without whom the important evaluation data on the project could not have been obtained. We are hopeful that the results of this project will provide new information to educators of sufficient importance to warrant the extensive efforts of all these people.

Lloyd M. Dunn
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Nashville, Tennessee
August, 1967

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CHAPTER I

INTRODUCTION

The vast majority of boys and girls from our inner city slums encounter inordinate barriers in achieving scholastic success. The problems are particularly acute for such children in the South. These pupils--especially Negro youth--bring to the schools a restricted and non-standard form of oral language which is incompatible with existing instructional procedures. Generally, they neither hear nor articulate the ending speech sounds. In addition, many of their teachers have been brought up in this same culture. Thus, many of them have similar problems in using the forty odd sounds of Standard English. Therefore, it is not surprising that these children, in contrast with middle class youngsters, have demonstrated progressive retardation in school. To correct this, it seemed to us, improved and more appropriate procedures were needed to teach oral and written language to such pupils. For this reason, we decided to study two new approaches for teaching language development to these southern children of poverty.

The Cooperative Language Development Project (CLDP) was designed to evaluate certain curricular adaptations among children from lower socio-economic areas within the school system. The study includes a treatment period of three years with provision for an additional three year follow-up. This monograph reports on the project after two years of treatment. Dunn and Mueller (1966) reported progress after one year and gave an overall description of the project.

Purpose

The purpose of the study was to examine the efficacy of an oral language development program alone, and in combination with an experimental reading approach, in improving the academic achievement, language development, and intellectual development of disadvantaged children in the primary grades. The oral language program consisted of the experimental edition of the Level #1 Peabody Language Development Kit (PLDK) for the first year, and the experimental edition of the Level #2 PLDK during the second year. The experimental reading program was the Mazurkiewicz and Tanyzer Early-to-Read i/t/a program (1963). When the children made the transition into traditional orthography (T.O.) they used the Basic Reading Series by McCracken and Walcutt (1963).

In contrast to the experimental groups, the control group used a conventional basal reading program (Houghton Mifflin) in traditional orthography (T.O.) and received no oral language stimulation.

Research Design

During the school year of 1964-65, ten experimental groups and a control group were established. These groups were designed to investigate the effectiveness of ITA, ITA in combination with PLDK, and reading in T.O. with PLDK. Among the T.O. groups, the PLDK was taught under a variety of personnel arrangements. There were 26 experimental classes in eight schools, with control children drawn from classes in six schools. The experimental groups were:

1. Reading in ITA, without PLDK.
2. Reading in ITA, plus PLDK taught by the teacher to the total class as a group.
3. Reading in T.O., plus PLDK taught by the teacher to the total class as a group.
4. Reading in T.O., plus PLDK taught by the teacher to the class in two groups (first the fast and then the slow half of the class).
5. Reading in T.O., plus PLDK by a team teaching approach (regular teacher and a visiting teacher) to the total class as a group.
6. Reading in T.O., plus PLDK by a team teaching approach to the class in two groups.
7. Reading in T.O.,plus PLDK by an itinerant teacher to the total class as a group.
8. Reading in T.O., plus PLDK by an itinerant teacher to the class in two groups.
9. Reading in T.O., plus PLDK by the regular teacher and a community volunteer to the total class as a group.
10. Reading in T.O., plus PLDK by the regular teacher and a community volunteer to the class in two groups.

In the second year (1965-66) one-half of the classes which received PLDK Level #1 during the first year received a second year of oral language stimulation using the experimental edition of PLDK Level #2. This created the following additional groups for the second year of the study:

11. Reading in ITA, plus two years of PLDK taught by the teacher to the total class as a group.
12. Reading in T.O., plus two years of PLDK by the teacher to the total class as a group.
13. Reading in T.O., plus two years of PLDK by the teacher to the class in two groups.
14. Reading in T.O., plus two years of PLDK by a team teaching approach to the total class as a group.
15. Reading in T.O., plus two years of PLDK by a team teaching approach to the class in two groups.
16. Reading in T.O., plus two years of PLDK by the regular teacher and a community volunteer to the total class as a group.
17. Reading in T.O., plus two years of PLDK by the regular teacher and a community volunteer to the class in two groups.

Therefore, in the second year there were children who had ITA alone, ITA plus PLDK for one year, ITA plus PLDK for two years, and reading in T.O. plus PLDK in the various teaching combinations for one year, and for two years.

Hypotheses

In contrast to the control children, it was predicted that: (1) the use of ITA alone in beginning reading instruction would enhance reading ability; (2) the use of PLDK alone would raise intellectual development, as well as enhancing oral language development and school achievement; (3) the use of ITA plus PLDK would be even more effective in fostering verbal intelligence, language development, and school achievement; and (4) the use of PLDK for two years would be more effective than using it for one year. (Findings concerning these predictions will be found in Chapter III.)

The second aspect of the study was to evaluate the relative effectiveness of different instructional personnel and differences in group size upon oral language acquisition of disadvantaged primary grade children. (Findings on this aspect of the study are presented in Chapter IV.)

Analysis of Results

Analysis of variance was used to compare treatments among the groups, with t tests employed to contrast differences between sub-groups. The .95 level of confidence was used throughout, with the 0.90 level cited, since this was an intervention study.

Background

Experience and research dealing with disadvantaged children clearly indicate the need for special intervention techniques if these children are to make an adequate adjustment to school. Though the need for intervention is clear, the areas in which intervention is needed and optimal techniques for such intervention have been less-well defined. The investigators in the present study assumed that language and reading were the two critical areas upon which special effort might lead to better educational adjustment. The choice of these curricular areas was based primarily on two factors: (1) these are areas of the school curriculum in the primary grades which receive the most emphasis, and (2) these are the areas in which deprived children appear to be most disadvantaged.

Other investigators have designed programs based upon similar assumptions. Bereiter and Englemann (1966) have constructed a pre-school program designed specifically for the acquisition of academic aptitudes. The curriculum includes reading, language, and arithmetic activities directed toward a few minimum and specific goals. They contend that a pre-school program cannot remediate all deficiencies among the disadvantaged. Therefore, selective focusing on specific objectives must take place if the program is to do more than just slightly increase several behavioral areas. In addition, they take the position that cultural deprivation is, to a great extent, language deprivation by middle class standards. Thus, the basic thrust of their program is designed to teach specific language skills. Lloyd (1965), in discussing reading instruction in the New York City Schools, points out the need to improve the reading achievement of disadvantaged children. Among the avenues being explored to accomplish this are efforts to encourage earlier language development and urban-oriented materials. Shepard (1962), in the St. Louis Schools, has demonstrated that deprived children can achieve at grade level when a concentrated effort is made to teach the basic skills.

The literature abounds with evidence to support the thesis that a disproportionate number of deprived children have low IQs (Haggard, 1954; Hunt, 1961; Sexton, 1961). Recent research by Kennedy *et al.* (1960) provides evidence that Negro school children of the South are severely handicapped in responding to such a well-known verbal test of intelligence as the 1960 Stanford-Binet, and are subject to progressive retardation in cognitive development as they move through school. Generally, the mean IQ score made by such children has tended to approximate 85. Thus, as many as 50 percent of these boys and girls could be classified as slow learners, and many as mildly retarded. In terms of their intelligence test scores, over half of such pupils will be more than seven years of age before developing a mental age score of six years.

In the past, many educators have held that mental age was probably the best single basis for estimating the educational level at which a child should be capable of achieving in school. If so, only a child with average intellect or above was assumed to be ready for formal instruction in reading upon entering school at the age of six. According to this rule, a child with an IQ of 75 would need to be eight years of age before developing a mental age of six and thus be ready for formal instruction in reading. As a result of this guideline, some teachers of underprivileged children have not exposed their primary school pupils to formal instruction in reading for as much as one or two years after entering school. Instead they have provided an extended reading readiness program for them. The work of Haynes (1959) suggests that the prevalent viewpoint concerning the need for an extended reading readiness program before beginning formal reading instruction may be in error.

Another widely accepted principle among educators has been the constancy of intellectual ability. Intelligence has been viewed by many teachers as a global ability largely determined by inheritance. Studies by Kirk (1958), Skeels (1965), and others reported in Hunt (1961) suggest that intelligence is far more amenable to change as a consequence of stimulation and deprivation than had been generally assumed. Furthermore, these scholars suggest that intelligence may be viewed advantageously as a number of abilities rather than a general factor. Language has been identified as a major one of these. The work of

Soviet researchers (Vgotsky, 1962; Luria, 1963) has clearly demonstrated the role of language as an essential tool to human thought.

In an Early Training Project conducted by Klaus and Gray (1963) of Peabody College, language development was an important part of the instructional program provided to 60 pre-school Negro children born in 1958 in Murfreesboro, Tennessee. This Murfreesboro project continued over three years plus three winters of contact with home instructors. The program has concentrated on developing positive attitudes toward school and on physical development. A later report (Gray & Klaus, 1965) suggests that the experimental subjects have made substantial gains on the 1960 Stanford-Binet, the Illinois Test of Psycholinguistic Abilities, and the Peabody Picture Vocabulary Test. As a result of the stimulation, it is predicted that these children will keep up in the regular grades. Their progress to date is promising.

Our thesis is that disadvantaged children can, with adequate stimulation, make one year of academic progress per year in the primary grades. There is growing support for this prediction. Nevertheless, a major question remains to be answered, namely how early is it necessary to begin a formal school program to counter the lack of cultural opportunities? Kirk (1958), as a result of an experiment in which pre-school children with IQ's between 60 and 80 were provided with a kindergarten program, concluded that six years was not too late to begin school for children from adequate homes, but did appear to be too late for children from inadequate homes and neighborhoods. Conant (1961), in Slums and Suburbs, pointed out the great need to provide kindergarten programs for underprivileged children living in slums. Thus, it is a testable question as to whether we can expect disadvantaged pupils to work up to grade placement in their school work when formal education is begun as late as the age of six years. However, due to the new teaching methods now available, there is a greater chance of them doing so today than even five years ago. The present study is intended to investigate this possibility.

The first year results of this Cooperative Language Development Project furnish evidence that deprived children can make adequate progress with proper stimulation. As reported by Dunn and Mueller (1966) the results showed that:

(1) Children learning to read in the ITA alone or in ITA plus PLDK did significantly better in school achievement (reading average ITA alone: 2.35, ITA plus PLDK: 2.50) than those using the traditional first grade reading program (1.82).

(2) The use of ITA plus PLDK did not enhance school achievement more than ITA alone when boys and girls were combined together, but did facilitate average reading achievement for underprivileged boys (ITA alone: 2.08; ITA plus PLDK: 2.33).

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(3) In terms of language development, the PLDK lessons increased overall language functioning as measured by the Illinois Test of Psycholinguistic Abilities and the Peabody Language Production Inventory, but did not significantly affect hearing vocabulary as measured by the Peabody Picture Vocabulary Test.

(4) In terms of intellectual growth, the PLDK groups made significantly greater gains in IQ than the non-PLDK groups.

(5) There were no outstanding differences between the treatment conditions (team teaching, whole class as a group versus class in two groups, etc.) under which the PLDK was taught.

These results suggest, at least after one year in school, that increased stimulation can help deprived children make more progress than that which has been traditionally reported.

CHAPTER II

DESCRIPTION OF THE PROJECT

This chapter includes a description of the subjects, the treatment programs, and the measurement techniques used in the study.

Subjects

Subjects were drawn from eight schools for the experimental treatments and six schools for the control group. Schools were chosen in which the largest proportion of the children would be classified as deprived.

Basic sociological data were obtained on all subjects. On the basis of this information, children who did not meet criteria for being classified as disadvantaged were deleted from the final evaluation. During the year 1964-65, complete pretest and posttest data were available (Dunn & Mueller, 1966) on 732 subjects--630 in the experimental treatments and 102 in the control group. For the second year (1965-66) complete data were available on 384 subjects--343 experimental and 41 control subjects. The pretest and posttest measures on intelligence and language, as well as reading scores at the end of second grade are presented for these subjects in Table 1. For each aspect of the study, equal or proportional samples were drawn from this original subject pool for the data analyses. Additional data on these samples will be presented in Chapters III and IV.

Experimental Treatment Programs

This study was designed to test the efficacy of two adaptations of the regular primary grade curriculum in classes made up primarily of disadvantaged children. The first adaptation involved a program of oral language development. The second adaptation involved substituting the Initial Teaching Alphabet for the conventional reading program in use in the schools.

Peabody Language Development Kit

An experimental edition of Level #1 PLDK designed by Dunn and Smith (1965) was used in the first year of the study and the experimental edition of Level #2 PLDK (Dunn & Smith, 1966) during the second year. The PLDK is designed to stimulate oral language and verbal intelligence by training the processes of reception, expression, and conceptualization.

Table 1

Summary of Basic Data by Treatment Group for the Final Subject Pool

Treatment Group	N		Fall 1964 Pretest			Spring 1966 Posttest				
			CA	IQ	LA	IQ	LA	WK	WD	RD
Without PLDK										
1. ITA	62	$\overline{X}$	74.13	86.06	60.92	89.23	79.81	2.610	3.037	2.524
		S	4.10	13.22	9.42	11.46	13.27	.804	1.133	.801
TO (Control)	41	$\overline{X}$	74.17	82.83	61.15	92.00	77.12	3.427	2.776	2.649
		S	4.79	9.94	7.11	10.91	7.49	.968	.674	.525
One year PLDK										
2. ITA; regular class	43	$\overline{X}$	75.77	82.07	59.65	89.40	82.35	2.621	2.988	2.553
		S	6.17	13.21	7.18	14.08	10.17	.814	1.050	.758
3. TO; regular class	18	$\overline{X}$	83.72	81.11	63.94	76.22	80.06	2.217	2.861	2.311
		S	7.88	10.13	6.55	9.48	9.98	.494	1.202	.668
4. TO; regular group	22	$\overline{X}$	74.05	86.23	63.45	92.45	83.32	2.086	2.186	2.077
		S	3.88	9.96	9.87	9.08	9.15	.356	.605	.452
5. TO; team class	12	$\overline{X}$	75.67	89.25	67.17	92.58	85.08	2.292	2.517	2.35
		S	6.02	13.53	6.93	14.99	10.22	.456	.948	.598

-continued

Table 1 - continued
Summary of Basic Data by Treatment Group for the Final Subject Pool

Treatment Group	N		Fall 1964 Pretest			Spring 1966 Posttest				
			CA	IQ	LA	IQ	LA	WK	WD	RD
15. TO; team group	17	$\overline{X}$	74.94	81.00	61.35	92.35	80.59	2.059	2.435	2.035
		S	3.21	12.52	5.30	9.38	9.73	.411	.621	.255
16. TO; volunteer class	11	$\overline{X}$	76.18	86.73	62.73	90.18	87.91	2.100	2.100	2.410
		S	5.19	13.96	9.22	16.73	14.47	.752	.828	.840
17. TO; volunteer group	8	$\overline{X}$	76.38	87.12	64.88	90.62	89.88	2.188	2.512	2.350
		S	6.61	11.69	11.41	16.40	13.11	5.79	.822	.534

Table 1 - continued

Summary of Basic Data by Treatment Group for the Final Subject Pool

Treatment Group	N		Fall 1964 Pretest			Spring 1966 Posttest				
			CA	IQ	LA	IQ	LA	WK	WD	RD
6. TO; team group	17	$\bar{X}$	73.94	82.58	58.24	84.17	76.82	1.988	2.324	2.270
		S	5.55	10.20	9.11	13.14	15.03	.513	.948	.827
7. TO; visiting class	13	$\bar{X}$	75.46	86.62	62.23	82.31	78.85	1.892	2.185	2.100
		S	3.78	9.17	6.71	11.45	12.97	.378	.787	.394
8. TO; visiting group	5	$\bar{X}$	72.80	92.40	60.40	97.60	80.80	2.080	2.680	2.040
		S	2.86	8.05	5.90	11.28	545	.268	.507	.288
9. TO; volunteer class	9	$\bar{X}$	76.22	81.78	60.11	85.89	80.33	2.478	2.889	2.444
		S	3.19	9.60	10.42	8.30	11.92	1.081	.882	.817
10. TO; volunteer group	7	$\bar{X}$	75.71	84.43	63.14	99.14	85.43	2.414	2.943	2.614
		S	3.40	6.48	5.24	7.52	7.37	.940	1.365	1.090
Two years PLDK										
11. ITA; regular class	27	$\bar{X}$	73.70	94.81	66.70	100.70	91.78	3.463	4.219	3.548
		S	3.52	10.37	7.41	10.90	10.84	.646	.688	.683
12. TO; regular class	24	$\bar{X}$	75.62	95.50	66.88	100.12	94.04	2.467	2.633	2.708
		S	5.67	17.64	9.86	18.19	12.71	.610	.700	.731
13. TO; regular group	15	$\bar{X}$	79.33	87.47	67.13	92.73	92.13	2.207	2.187	2.433
		S	6.56	12.39	8.68	18.20	11.23	.531	.710	.85
14. TO; team class	33	$\bar{X}$	77.27	77.91	57.70	84.33	80.24	2.145	2.518	2.364
		S	6.71	11.20	10.44	13.45	15.21	.506	.965	.675

-continued

Training of reception is provided through stimulation of the three modalities of sight, hearing and touch. Expression is stimulated through both the vocal and motor channels. The lessons concentrate on the development of verbal intelligence involving divergent, convergent, and associate thinking. Figure 1 outlines a model of the psycholinguistic processes trained by the lessons.

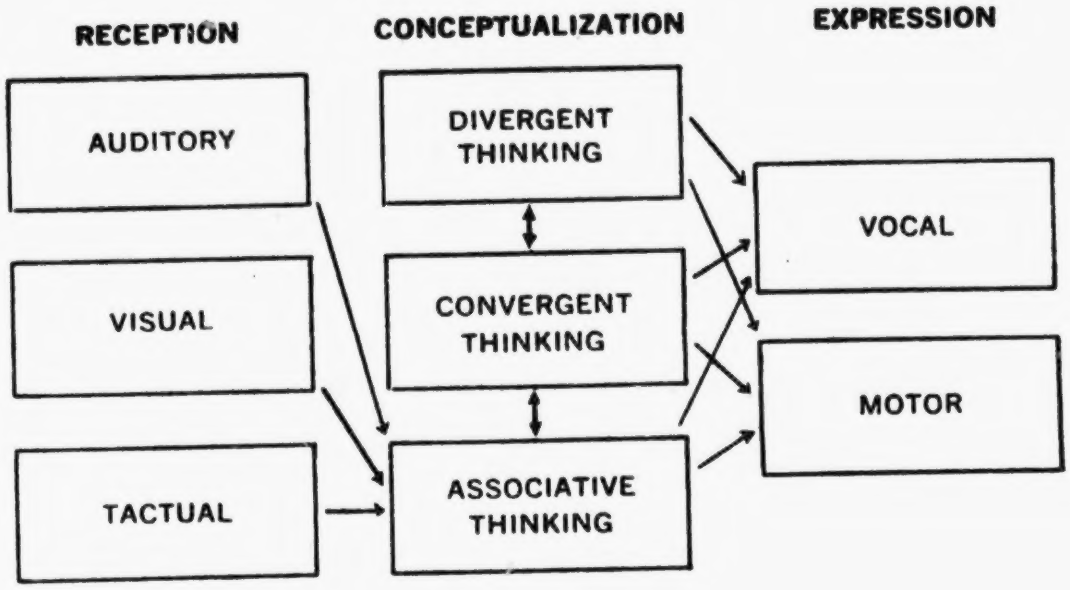

Fig. 1 Model of the Psycholinguistic Processes Trained by the Peabody Language Development Lessons.

Level #2 PLDK is a continuation of the program in Level #1 (Dunn & Mueller, 1966) and is designed for children whose language ages are in the range six to eight years. Included in the experimental edition were 180 daily lesson plans, each containing three activities from among 24 different categories. Typical categories were: brainstorming, classification, story time, and vocabulary building. Also, there were over 400 picture cards, I Wonder cards, plastic color chips, two hand puppets, and a recorded tape in the kit.[1] The lessons were planned to provide 30 - 40 minutes of well-planned oral language stimulation exercises each day. The philosophy of the PLDK is that Language Time should be a half hour interlude from conventional school work. Though early lessons require considerable teacher participation, the overall goal was to maximize the oral language behavior of the pupils, giving them an opportunity to think and talk in a setting that was less structured than during a regular period of school work. The children were not called on to read or write, nor was any seat work involved.

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[1] Revised versions of both Level #1 and Level #2 of the PLDK are available from American Guidance Service, Inc., Publishers' Building, Circle Pines, Minnesota, 55014.

Due to this being an experiment, teachers were encouraged to follow the lessons as closely as possible. However, they were free to make minor adaptations in content, particularly where it seemed necessary to do so so as to take into account individual differences among pupils.

One aspect of this study was to evaluate the effectiveness of the PLDK taught under a variety of administrative arrangements and by different kinds of personnel. Some classes were taught PLDK as one total group, and others were divided into two groups for the oral language program. Classes averaged 30 to 35 pupils. Research with an earlier version of the language stimulation program (Smith, 1962) had utilized a language developmentalist going into the classroom to conduct all language training sessions. To investigate whether the regular classroom teacher could be just as effective with these lessons and materials, four types of teaching organization were evaluated. These arrangements included the regular teacher teaching the lesson, team teaching by the regular teacher plus an itinerant language developmentalist, and the regular teacher assisted by a community volunteer. In addition, one-half of the classes receiving ITA instruction in reading also received PLDK from their regular teacher either for one year, or two years.

Initial Teaching Alphabet

The beginning reading program was carried out using the Early-to-Read series developed by Mazurkiewicz and Tanyzer (1963). This program consists of eight text books and five workbooks designed to carry the child from a point of beginning reading in ITA through the transition to traditional orthography (T.O.) at the high third grade level. In contrast to the Downing Reading Series from England, which utilizes a sight vocabulary approach, the Mazurkiewicz and Tanyzer program is based on the premise that the children should first learn the individual sound symbols before being taught to synthesize them into words, sentences, paragraphs, and stories. Thus, a phonetic rather than a sight vocabulary approach is used.

None of the experimental teachers had used ITA before. They participated in a three-day workshop prior to the opening of school and then were encouraged to follow the reading program in a fairly standard manner. All teachers tended to stress learning of sound symbols in isolation and in key words. Some variability occurred in the extent to which the teachers used experience charts, labels for objects in the room, and the bulletin board to give children added experiences with the ITA system. A small collection of supplementary reading materials in ITA was also used, including a set of the Downing Readers in each classroom, as well as books in traditional orthography.

The last two textbooks in the Early-to-Read series (#7 and #8) are designed to make the transition from ITA to T.O. When the transition was completed, the children in the experiment moved into the Basic Reading series by McCracken and Walcutt published by J. B. Lippincott Company, beginning with Book 2-1. This program has a systematic phonic approach in T.O. and appeared to be especially appropriate as a follow-up for the Early-to-Read series. About one-third of the experimental children completed the Early-to-Read series before the end of the first school year. A few who had not finished the ITA series by Christmas of the second year were shifted into the easier first grade work in the Basic Reading series at that time. ITA teachers were asked to stay with their pupils for two years. At least two teachers in a school were using ITA, providing for a buddy system for sharing problems and solutions. A number of the teachers re-grouped their pupils in the second year, one teacher taking the more able, and the other the less able children. In several cases, new teachers replaced teachers who moved. The controls used the conventional beginning reading program provided by the Reading-for-Meaning Series published by Houghton-Mifflin.

Teachers

Thirty-one first grade classes from the six schools participated in the experimental treatments during the first school year (1964-65). For the second year of the study (1965-66), there were 30 experimental classes (the two classes taught by itinerant teachers were combined due to loss of subjects). All of the experimental and control teachers had more than one year of teaching experience, were fully certified in elementary education, and held one or more degrees.

The experimental teachers in this study were given a number of incentives not available to the control teachers. They were provided with a small supplementary stipend and were asked to attend in-service training sessions throughout the year averaging approximately one every two weeks. The experimental teachers were provided other stimulation. Supplementary materials were purchased. They were visited frequently by the researchers, school officials, and other visitors, and were given considerable recognition by their principals. All experimental teachers had an opportunity to observe each other teach and to share ideas. They were visited regularly by a supervisor. There can be little doubt that the teachers knew they were part of an experiment. Motivation to excellence in teaching was high. In contrast, the control teachers were not similarly stimulated. The children were simply tested at the beginning of the year and retested at the end of it. No doubt, the pretesting alerted the control teachers that the progress of their pupils was being monitored. Nevertheless, a very important part of the experiment treatment was the added incentives available to the experimental teachers, but not provided to the control teachers.

Evaluation

The program was appraised in three areas: school achievement; language abilities; and intellectual functioning.

School Achievement

The Metropolitan Achievement Test (MAT), Primary Battery II, was used to provide achievement data at the end of the second year. The MAT was selected because it is used throughout the Nashville-Davidson County Metropolitan Public Schools and is administered routinely each year. This not only allowed for direct comparison of school achievement between the experimental group and all other children in the school district, but also reduced test-administration problems. Four subtests were administered: word knowledge (WK), word discrimination (WD), reading comprehension (R), and spelling (S). The test was standardized on a nation-wide sample of school children. A test-retest reliability coefficient of 0.83 is reported for the total test. Subtest reliability coefficients based on corrected split-half method are 0.90 for word knowledge, 0.87 for word discrimination, and 0.92 for reading comprehension.

Language Abilities

The Illinois Test of Psycholinguistic Abilities (ITPA) and the Peabody Language Production Inventory (PLPI) were used to provide data on language abilities. The ITPA was used as the principal measure of language skills and the PLPI was used to supplement data on oral expression.

The ITPA (McCarthy & Kirk, 1961) is an individually administered test measuring language abilities across the range 2-6 to 9-0 years of age. It yields age equivalent and standard scores on total language functioning and on each of the nine subtests. The following nine facets of oral language development are measured by the instrument:

(1) Auditory decoding--the ability to understand spoken words.
(2) Visual decoding--the ability to classify pictures from memory.
(3) Auditory-vocal association--the ability to reason by analogies.
(4) Visual-motor association--the ability to relate pictures in a meaningful way.
(5) Vocal encoding--the ability to express ideas in spoken words.
(6) Motor encoding--the ability to express ideas in gestures.
(7) Auditory-vocal automatic--the ability to produce language automatically and accurately in a grammatical sense.
(8) Auditory-vocal sequencing--the ability to reproduce a series of digits accurately from memory.
(9) Visual-motor sequencing--the ability to reproduce a series of pictures from memory.

The ITPA is designed to measure two levels of meaning--the representational level (subtests one through six) on which subjects must deal meaningfully with language symbols, and the automatic-sequential level (subtests seven through nine) on which subjects deal with the nonmeaningful use of language. Three processes of language are measured--decoding or reception, encoding or expression, and association described by the test authors as the internal manipulation of symbols. The ITPA measures two stimulus channels (auditory and visual) and two response channels (vocal and motor).

A split-half reliability coefficient of 0.99 and a test-retest reliability coefficient of 0.97 is reported for the standardization sample. At present, evidence of validity of the ITPA is limited. Early studies of the test have indicated fairly high correlations with measures of general intelligence. In the standardization of the test (McCarthy & Kirk, 1961) a correlation of 0.96 was obtained between age scores of the S-B and the ITPA. McCarthy and Olson (1964) reported an extensive study of the validity of the ITPA with a group of 86 children ranging in age from 7 years no months to 8 years 6 months. They concluded that the concurrent, construct, and predictive validities of the ITPA are adequate but the content and diagnostic validities are less adequate. The ITPA was selected as principal measure of language abilities on the basis of the promise it has shown in early studies and the extensive research its publication has stimulated. Furthermore, it is the only well developed test of oral language functioning which is generally available.

The Peabody Language Production Inventory (Nelson, 1964) is a nonstandardized, individually-administered test measuring oral language ability. The test is administered by showing the subject a series of three pictures (street scene, Good Humor Man scene, operating room scene) and asking him to relate a story about the pictures. The responses are rated on three dimensions of language performance; namely, level of abstraction, structural complexity and general quality of speech. However, a single pooled raw score was used in this study. Responses to each picture are rated separately for level of abstraction and for structural complexity. A single rating of the general category is obtained for the entire test. The PLPI was included to provide data on oral language abilities involved in the connected, free speech of the subject. Thus, the PLPI data were used to supplement the ITPA.

Intellectual Functioning

The Stanford-Binet Intelligence Scale (S-B) was used to provide data on intellectual functioning. The S-B (Terman-Merrill, 1960) is a standized, individual intelligence scale yielding mental age and intelligence quotient scores. Items range from simple manipútation of objects to abstract reasoning. They are grouped into age levels according to ascending difficulty, ranging from age two to superior adult. Although the test includes a number of performance-type items, particularly at lower age levels, it is essentially verbal. Reliability coefficients of earlier editions range from 0.83 to 0.98 depending on age and IQ level (Sontag *et al.*, 1958). Higher correlations are obtained at upper age levels, and at low IQ levels. Validity in predicting school achievement, particularly in more verbally oriented subjects such as language and reading, has been generally good. Bond (1940) reported correlation coefficients ranging from 0.43 to 0.73 between Binet scores and achievement in various school subjects among tenth grade youngsters. Although a restandardization of the scale was not carried out in connection with 1960 edition, the test authors suggest the latest revision retains the main characteristics of the 1937 edition, including high reliability and validity.

The S-B is among the most widely used tests of general intelligence (Silverstein, 1953, Weise, 1960). In addition, it is the individual intelligence scale which has been demonstrated to be effective at the age and ability level of the subjects in the present sample. Thus, it was the instrument of choice for evaluation of intelligence in this study.

Testing Schedule

The S-B, ITPA, and PLPI were given to the children prior to the beginning of school in the Fall of 1964. A few youngsters who were not tested prior to the beginning of school were tested during the first week of school. Interim testing took place during the Spring of 1965, and again in the Spring of 1966. Achievement tests were administered during the last four weeks of school by project personnel, the classroom teacher serving as a monitor. The individual tests (S-B, ITPA, and PLPI) were readministered during the last six weeks of school by psychologists and psychometric technicians on the project staff.

CHAPTER III

THE EFFICACY OF THE INITIAL TEACHING ALPHABET AND THE PEABODY LANGUAGE DEVELOPMENT KITS

The purpose of this aspect of the study was to evaluate the efficacy of: (1) the Initial Teaching Alphabet (ITA) followed by the Basic Reading Series in teaching reading, and (2) the Peabody Language Development Kits (PLDK) in stimulating oral language and verbal intelligence. It was predicted that: (1) the use of ITA in beginning reading would enhance reading ability; (2) the use of the PLDK lessons would raise the intelligence quotients (IQ's) of the children while, at the same time, enhancing their oral language development and school achievement; (3) the ITA plus PLDK would be even more effective in fostering verbal intelligence, language development, and school achievement; and (4) the use of PLDK for two years would be more effective than using it for one year.[1]

Procedures

From the 384 subjects on whom complete data were available, a selected sample was established by deleting subjects who did not meet criteria set up for disadvantaged children. More specifically, children were excluded with IQ's above 110, as well as those from adequate housing and socio-economic status. As in the first year analysis, proportional samples of boys and girls from each of the treatment groups were then randomly selected. This reduced the number of subjects to 200 for this analysis, with 22 in the smallest group and 44 in the largest group (see Table 2). In contrast to the first year, analyses of pretest data indicated significant differences between groups in IQ, MA, and LA (see Table 3). These differences came about as the result of the division which created the two year PLDK groups. However, basic home information suggested that the educational level of the parent[2], the number of members in the family, and the type of housing were comparable (see Table 4).

Twelve teachers from six schools were involved in the ITA and PLDK treatments reported in this chapter: four in ITA only (Group 1); two in ITA plus one year PLDK (Group 2); two in ITA plus two years PLDK (Group 11); two in T.O. plus one year PLDK (Group 3); and two in T.O. plus two years PLDK (Group 12).

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[1] In this chapter, only data where the PLDK lesson was taught by the regular teacher to her total group are reported.

[2] The highest level of education of either parent was used.

Table 2

Summary of Pretest Data on the Selected Samples Used for the Second Year Analyses

Treatment Group	N	CA		IQ		MA		LA	
		$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S
ITA only									
Boys	22	73.95	3.98	84.73	12.22	63.36	8.65	60.59	9.57
Girls	22	75.45	4.53	84.18	11.73	64.68	8.99	60.55	7.61
Total	44	74.70	4.28	84.45	11.84	64.02	8.74	60.57	8.55
Control (TO only)									
Boys	20	74.90	5.58	80.90	11.78	61.60	8.04	59.95	7.69
Girls	20	73.60	3.97	84.65	7.86	63.30	5.48	62.45	6.61
Total	40	74.25	4.82	82.78	10.07	62.45	6.85	61.20	7.19
ITA-One year PLDK									
Boys	17	76.71	6.59	77.76	10.88	61.12	7.92	60.06	7.46
Girls	17	75.94	6.29	82.06	10.37	63.35	7.66	58.88	6.39
Total	34	76.32	6.35	79.91	10.69	62.23	7.75	59.47	6.87
TO-One year PLDK									
Boys	17	76.94	6.32	83.59	11.94	65.35	7.20	62.24	6.87
Girls	17	77.24	5.60	85.59	8.86	67.24	7.04	63.00	8.71
Total	34	77.09	5.88	84.59	10.40	66.29	7.08	62.62	7.73
ITA-Two years PLDK									
Boys	11	74.27	3.88	91.73	6.92	68.55	3.08	62.64	4.30
Girls	11	73.27	2.90	91.91	9.33	67.82	5.88	66.09	6.47
Total	22	73.77	3.78	91.82	8.02	68.18	4.59	64.36	5.64
TO-Two years PLDK									
Boys	13	78.15	4.00	91.23	7.38	71.92	6.34	70.08	7.88
Girls	13	75.31	6.13	88.23	10.13	67.00	6.23	63.15	6.59
Total	26	76.73	5.27	89.73	8.82	69.46	6.65	66.62	7.95
Grand Total	200	75.45	5.21	84.86	10.82	64.96	7.65	62.06	7.75

Table 3

Analysis of Variance of Pretest Data by Treatment Group

Variable	Source of Variation	Degree of Freedom	Sum of Squares	Mean Squares	F ratio
CA	Between Groups	11	409.290	37.208	1.399
	Within Groups	188	5000.305	26.597	
	Total	199	5409.595		
IQ	Between Groups	11	3091.427	81.039	2.612*
	Within Groups	188	20225,928	7.585	
	Total	199	23317.355		
MA	Between Groups	11	1639.856	49.078	2.796*
	Within Groups	188	10022.739	53.312	
	Total	199	11662.595		
LA	Between Groups	11	1478.772	34.434	2.411*
	Within Groups	188	10480.508	55.747	
	Total	198	11959.280		

*$F_{.95}$ = 1.83

Table 4

Basic Home and Family Information on the Selected Samples Used for the Second Year Analysis

Group	N	Percentage of Families on Welfare	Average No. of Children per Family	Average No. of Adults per Family	Mean Educ. Level of Parent*	Housing Conditions in Percentage			
						extremely poor	moderately poor	fair	good
ITA only									
Boys	22	18	3.6	1.9	9.8	43	38	19	-
Girls	22	5	4.3	2.0	10.8	30	25	45	-
Total	44	12	4.0	1.9	10.3	36	32	32	-
Control (TO only)									
Boys	20	7	5.0	2.4	9.9	30	41	29	-
Girls	20	8	4.4	2.0	10.7	6	50	44	-
Total	40	7	4.7	2.2	10.3	18	45	37	-
ITA-One year PLDK									
Boys	17	12	5.1	2.3	9.3	37	44	19	-
Girls	17	7	4.3	2.5	9.5	27	53	20	-
Total	34	10	4.7	2.4	9.4	32	49	19	-
TO-One year PLDK									
Boys	17	6	5.8	2.0	10.5	6	56	38	-
Girls	17	15	6.2	1.8	10.6	13	27	60	-
Total	34	10	6.0	1.9	10.5	10	42	48	-
ITA-Two years PLDK									
Boys	11	9	3.5	2.0	12.2	-	45	55	-
Girls	11	-	4.5	2.6	11.5	-	27	73	-
Total	22	5	4.0	2.3	11.8	-	36	64	-
TO-Two years PLDK									
Boys	13	8	4.6	2.5	10.2	8	-	92	-
Girls	13	9	3.7	2.3	10.1	-	8	92	-
Total	26	9	4.1	2.4	10.2	4	4	92	-
Grand Total	200	9	4.6	2.2	10.3	19	36	45	-

*Educational level of the best educated parent

Table 5

Means and Standard Deviations for School Achievement Data (Grade Equivalent Scores) as Measured by the Metropolitan Achievement Test

Treatment Group	N	MAT							
		WK		WD		R		S	
		$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
ITA only									
Boys	22	2.564	.904	2.818	1.285	2.532	.920	2.586	1.359
Girls	22	2.664	.684	3.332	.803	2.550	.678	3.059	1.055
Total	44	2.614	.794	3.075	1.090	2.541	.799	2.823	1.226
Control (TO only)									
Boys	20	2.485	.427	3.090	.974	2.460	.589	3.395	.896
Girls	20	2.835	.501	3.965	.640	3.030	.577	4.100	.659
Total	40	2.660	.492	3.528	.926	2.745	.644	3.748	.855
ITA-One year PLDK									
Boys	17	2.376	.782	2.676	1.060	2.294	.661	2.500	.949
Girls	17	2.788	.752	3.224	1.052	2.753	.727	3.041	1.125
Total	34	2.582	.784	2.950	1.077	2.524	.723	2.771	1.061
TO-One year PLDK									
Boys	17	2.094	.334	2.294	.781	2.000	.324	2.076	.685
Girls	17	2.306	.501	2.871	1.164	2.465	.720	2.788	1.210
Total	34	2.200	.433	2.582	1.019	2.232	.598	2.432	1.034
ITA-Two years PLDK									
Boys	11	3.200	.646	3.991	.701	3.264	.533	3.873	.709
Girls	11	3.473	.522	4.300	2.908	3.482	.600	3.927	.705
Total	22	3.336	.590	4.145	.690	3.373	.565	3.900	.690
TO-Two years PLDK									
Boys	13	2.423	.691	2.231	.688	2.623	.951	2.669	.888
Girls	13	2.531	.584	2.908	.841	2.800	.723	3.069	.943
Total	26	2.477	.629	2.569	.828	2.712	.832	2.869	.920
Grand Total									
Boys	100	2.488	.716	2.812	1.088	2.479	.768	2.799	1.110
Girls	100	2.730	.670	3.413	.993	2.801	.725	3.315	1.080
Total	200	2.609	.702	3.112	1.082	2.640	.762	3.057	1.122

Table 6

Analysis of Covariance of Word Knowledge Subtest Scores on the Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(ITA vs No ITA)	1	4.682	22.445	-10.251	5.257	1	5.257	15.462*
B(PLDK)	2	6.577	2215.304	109.195	2.364	2	1.182	3.473*
C(Sex)	1	2.928	89.255	16.093	2.117	1	2.120	6.226*
A x B interaction	2	6.650	460.363	- .399	6.932	2	3.466	10.185*
A x C interaction	1	.000	1.435	- .007	.000	1	.000	.000
B x C interaction	2	.135	154.883	4.095	.092	2	.046	.135
A x B x C	2	.578	147.742	9.146	.191	2	.095	.279
Error	188	76.593	20225.928	511.872	63.639	187	.340	
Total	199	98.144	23317.355	639.743	80.592			

* $F_{.95} = 3.04$

Table 7

Analysis of Covariance of Word Discrimination Subtest Scores on the Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(ITA vs No ITA)	1	4.836	22.445	-10.418	5.388	1	5.388	6.528*
B(PLDK)	2	12.357	2215.304	93.564	9.090	2	4.545	5.507*
C(Sex)	1	18.060	89.255	39.966	16.140	1	16.140	19.556*
A x B interaction	2	31.358	460.363	4.475	31.377	2	15.688	19.009*
A x C interaction	1	.732	1.435	.424	.676	1	.676	.818
B x C interaction	2	.280	154.883	2.284	.394	2	.197	.238
A x B x C	2	.359	147.742	3.934	.234	2	.117	.1414
Error	188	164.836	20225.928	460.710	154.342	187	.825	
Total	199	232.819	23317.355	594.938	217.639			

* $F_{.95} = 3.04$

Table 8

Analysis of Covariance of Reading Subtest Scores on the Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(ITA vs No ITA)	1	1.217	22.445	-5.226	1.568	1	1.568	3.941*
B(PLDK)	2	11.405	2215.304	151.481	4.411	2	2.206	5.543*
C(Sex)	1	5.184	89.255	21.413	3.946	1	3.946	9.917*
A x B interaction	2	6.307	460.363	-8.658	7.116	2	3.558	8.942*
A x C interaction	1	.605	1.435	.385	.571	1	.571	1.435
B x C interaction	2	.558	154.883	8.518	.365	2	.182	.459
A x B x C	2	.995	147.742	12.365	.382	2	.191	.480
Error	188	89.349	20225.928	549.701	74.409	187	.398	
Total	199	115.620	23317.355	729.980	92.767			

$^{*}F_{.95} = 3.04$

Table 9

Analysis of Covariance of Spelling Subtest Scores on the Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(ITA vs No ITA)	1	.045	22.445	1.005	.006	1	.006	.007
B(PLDK)	2	21.568	2215.304	139.609	15.694	2	7.847	8.706*
C(Sex)	1	13.313	89.255	34.314	11.476	1	11.476	12.732*
A x B interaction	2	32.480	460.363	-34.798	34.596	2	17.298	19.192*
A x C interaction	1	.627	1.435	.392	.608	1	.608	.675
B x C interaction	2	1.206	154.883	13.106	.921	2	.460	.511
A x B x C	2	.135	147.742	-.104	.051	2	.025	.028
Error	188	181.417	20225.928	510.014	168.557	187	.901	
Total	199	250.790	23317.355	663.539	231.908			

$^*F_{.95} = 3.04$

Table 10

Means and Standard Deviation for Intellectual Language Development
Pre, Post and Gain Scores

Treatment Group	N		SB-IQ Pretest	SB-IQ Posttest	SB-IQ Gain	SB-MA Pretest	SB-MA Posttest	SB-MA Gain	ITPA-LA Pretest	ITPA-LA Posttest	ITPA-LA Gain
ITA only											
Boys	22	$\bar{X}$	84.73	88.68	3.95	63.36	85.91	22.55	60.59	79.73	19.14
		S	12.22	12.15		8.65	11.80		9.57	14.50	
Girls	22	$\bar{X}$	84.18	86.36	2.18	64.68	84.64	19.95	60.55	78.23	17.68
		S	11.7[illegible]	10.52		8.99	10.60		7.61	11.44	
Total	44	$\bar{X}$	84.45	87.52	3.07	64.02	85.27	21.25	60.57	78.98	18.41
		S	11.84	11.29		8.74	11.11		8.55	12.93	
Control (TO only)											
Boys	20	$\bar{X}$	80.90	90.30	9.40	61.60	87.85	26.25	59.95	76.15	16.20
		S	11.78	10.85		8.04	9.54		7.69	8.15	
Girls	20	$\bar{X}$	84.65	94.25	9.60	63.30	89.55	26.25	62.45	78.40	15.95
		S	7.86	10.88		5.48	10.12		6.61	6.85	
Total	40	$\bar{X}$	82.78	92.28	9.50	62.45	88.70	26.25	61.20	77.28	16.08
		S	10.07	10.91		6.85	9.75		7.19	7.52	
ITA-One year PLDK											
Boys	17	$\bar{X}$	77.76	90.82	13.06	61.12	88.53	27.41	60.06	81.35	21.29
		S	10.88	11.04		7.92	11.62		7.46	9.87	
Girls	17	$\bar{X}$	82.06	83.88	1.82	63.35	82.53	19.18	58.88	80.41	21.53
		S	10.37	9.94		7.66	6.32		6.39	6.55	
Total	34	$\bar{X}$	79.91	87.35	7.44	62.23	85.53	23.30	59.47	80.88	21.41
		S	10.69	10.93		7.75	9.70		6.87	8.26	

-continued

Table 10 - continued
Means and Standard Deviation for Intellectual Language Development
Pre, Post and Gain Scores

Treatment Group	N		SB-IQ Pretest	SB-IQ Posttest	SB-IQ Gain	SB-MA Pretest	SB-MA Posttest	SB-MA Gain	ITPA-LA Pretest	ITPA-LA Posttest	ITPA-LA Gain
TO-One year PLDK											
Boys	17	$\overline{X}$	83.59	87.35	3.76	65.35	87.06	21.71	62.24	84.59	22.35
		S	11.94	12.82		7.20	8.43		6.87	9.47	
Girls	17	$\overline{X}$	85.59	85.41	-.18	67.24	85.18	17.94	63.00	79.53	16.53
		S	8.86	10.41		7.04	7.58		8.71	8.64	
Total	34	$\overline{X}$	84.59	86.38	1.79	66.29	86.12	19.83	62.62	82.06	19.44
		S	10.40	11.54		7.08	7.95		7.73	9.29	
ITA-Two years PLDK											
Boys	11	$\overline{X}$	91.73	95.45	3.73	68.55	92.00	23.45	62.64	87.64	25.00
		S	6.92	7.66		3.08	7.32		4.30	9.12	
Girls	11	$\overline{X}$	91.91	99.27	7.36	67.82	94.36	26.55	66.09	90.18	24.09
		S	9.33	8.82		5.88	8.24		6.47	10.18	
Total	22	$\overline{X}$	91.82	97.36	5.54	68.18	93.18	25.00	64.36	88.91	24.55
		S	8.02	8.30		4.59	7.70		5.64	9.52	
TO-Two years PLDK											
Boys	13	$\overline{X}$	91.23	94.69	3.46	71.92	96.00	24.08	70.08	96.08	26.00
		S	7.38	13.29		6.34	10.89		7.88	9.25	
Girls	13	$\overline{X}$	88.23	97.46	9.23	67.00	95.08	28.08	63.15	88.54	25.38
		S	10.13	17.33		6.23	13.18		6.59	11.47	
Total	26	$\overline{X}$	89.73	96.08	6.35	69.46	95.54	26.08	66.62	92.31	25.69
		S	8.82	15.19		6.65	11.86		7.95	10.91	
Grand Total	200	$\overline{X}$	84.86	90.44	5.58	64.96	88.35	23.40	62.06	82.31	20.26
		S	10.82	12.06		7.65	10.44		7.75	11.10	

Table 11

Analysis of Covariance of Language Age Gain Scores as Measured
by the Illinois Test of Psycholinguistic Abilities

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio*
A(ITA vs No ITA)	1	57.245	22.445	-35.415	74.175	1	74.175	1.146
B(PLDK)	2	1895.004	2215.304	1640.254	1337.496	2	668.748	10.329*
C(Sex)	1	114.005	89.255	-101.115	163.698	1	163.698	2.528
A x B interaction	2	140.577	460.363	-69.975	174.363	2	87.182	1.346
A x C interaction	1	26.645	1.435	-2.285	28.509	1	28.509	.440
B x C interaction	2	44.572	154.883	-63.819	59.211	2	29.606	.457
A x B x C	2	134.212	147.742	85.103	110.552	2	55.276	.854
Error	188	12795.735	20225.928	3732.137	12107.072	187	64.744	
Total	199	15207.995	23317.355	5184.885	14055.076			

$^*F_{.95} = 3.04$

Table 12

Analysis of Variance of Posttest Scores on the Peabody Language Production Inventory

Source of Variation	Degree of Freedom	Sum of Squares	Mean Squares	F Ratio
A(ITA vs No ITA)	1	612.500	612.500	3.038
B(PLDK)	2	1339.382	669.691	3.322*
C(Sex)	1	124.820	224.820	.619
A x B Interaction	2	740.476	370.238	1.836
A x C Interaction	2	3.920	1.960	.010
B x C Interaction	2	115.724	57.862	.287
A x B x C	2	25.783	12.892	.064
Error	188	37,899.715	201.594	
Total	199	40,862.320		

*$F_{.95} = 3.04$

Table 13

Analysis of Variance of MA Gains as Measured by the Stanford-Binet Intelligence Scale

Source of Variation	Degree of Freedom	Sum of Squares	Mean Squares	F Ratio
A(ITA vs No ITA)	1	78.125	78.125	1.197
B(PLDK)	2	463.804	231.902	3.554*
C(Sex)	1	153.125	153.125	2.347
A x B Interaction	2	664.270	332.135	5.090*
A x C Interaction	1	114.005	114.005	1.747
B x C Interaction	2	651.637	325.818	4.994*
A x B x C	2	8.561	4.280	.066
Error	188	12,226.269	65.246	
Total	199	14,399.795		

* $F_{.95} = 3.04$

Results

Results for the investigation after two years are reported for each of the following three areas: school achievement, language development, and intelligence. Analyses were made between: (1) the combined ITA groups and the combined conventional reading groups (including controls), (2) PLDK groups and no PLDK groups, and (3) boys and girls.

School Achievement

MAT equivalent scores are presented in Table 5 for the total experimental sample and for the various sub-groups. Because of differences in IQ, conclusions cannot be drawn directly from the descriptive data in this table. The results from analyses of covariance are presented in Tables 6, 7, 8, and 9, covarying on IQ. On word knowledge, word discrimination, and reading, significant differences were observed on reading approach, language program, and sex. The interaction effect between ITA and PLDK was significant. Children using ITA made significantly greater scores on all reading subtests than those learning to read in the conventional program. However, the prediction that children using ITA without PLDK would achieve at a higher level than the control children was not supported. There were no significant differences between these two groups on work knowledge or reading, but the controls excelled the ITA only group on word discrimination (t= -2.051). Children receiving PLDK for two years did better than those receiving no PLDK or PLDK for one year. The girls' achievement significantly surpassed the achievement of the boys. The interaction was accounted for by the superior performance of the ITA plus two year PLDK group.

For spelling, only the variables of PLDK versus no PLDK, and sex were significant. There was no significant difference between ITA and the conventional reading program. Children receiving PLDK for two years performed better in spelling than those receiving no PLDK or one year PLDK, with girls doing better than boys. However, there was a significant interaction effect between ITA and PLDK. The interaction effect was caused by the superiority of the ITA plus two year PLDK group and the control group over the other groups.

Language Ability

Table 10 presents the language data derived from the ITPA. Table 11 reports the results of the analysis of covariance (removing the effect of IQ differences) of the language age scores. Only the difference between PLDK versus no PLDK was significant. Those children receiving two years of PLDK made greater language gains than children receiving PLDK for one year, and those with one year grew more in language than those who did not receive PLDK, regardless of whether they were in an experimental or a control reading group. These results were confirmed also by the findings of the analysis of variance of posttest scores on the PLPI (see Table 12). Therefore, by two independent measures, the effectiveness of the use of PLDK in fostering language growth was confirmed.

Table 14

Analysis of Variance of IQ Gains as Measured by the Stanford-Binet Intelligence Scale

Source of Variation	Degree of Freedom	Sum of Squares	Mean Squares	F Ratio
A(ITA vs No ITA)	1	46.080	46.080	.502
B(PLDK)	2	96.122	48.061	.524
C(Sex)	1	158.420	158.420	1.727
A x B Interaction	2	1370.422	685.221	7.468*
A x C Interaction	1	204.020	204.020	2.224
B x C Interaction	2	1110.566	555.283	6.052*
A x B x C	2	56.035	28.018	.305
Error	188	17249.035	91.750	
Total	199	20290.720		

*$F_{.95} = 3.04$

Intellectual Ability

The pretest, posttest, and gain scores on MA and IQ are reported in Table 10. Tables 13 and 14 present analyses of variance of MA and IQ gains respectively. As seen in Table 13, two years of PLDK enhanced intellectual development (MA) appreciably over no PLDK or one year PLDK. However, there was no difference between the control group and the two year PLDK group. The main effect for IQ gain scores was not statistically significant as seen in Table 14.

Two significant interactions were found in both Tables 13 and 14 for reading methods vs. PLDK, and for sex vs. PLDK. For the ITA groups, two years of PLDK produced a greater gain in intellectual development than one year of PLDK. Furthermore, one year of PLDK produced a greater gain than the no PLDK. For the conventional reading program, the one year PLDK groups made the lowest gain. For the interaction between PLDK and sex, boys exceeded the gains of girls with one year PLDK, but the girls surpassed the boys when the PLDK treatment extended for two years.

Discussion

The results after two years indicate that both ITA and PLDK show potential for altering the behavior of disadvantaged children. In some instances, the two treatments appear to be more effective when used together than when used alone.

The most effective intervention treatment was the combination of ITA plus two years PLDK. These youngsters achieved at a higher level in reading than any of the other groups. When the total ITA group was compared to the combination of groups taught in a conventional reading program, the ITA was superior. But, contrary to the first-year results, the youngsters learning to read in ITA without PLDK did not exceed the control group. It is possible that the Hawthorne effect was operating for the ITA group during the first year, but diminished in the second year when the treatment was no longer new. The superior performance in spelling of the ITA plus two year PLDK group over the other treatment groups is difficult to interpret. The fact that the experimentals did just as well as the controls in spelling suggests that children who use ITA in written language in their first year of school, are able to make a transition quite well to T.O. with its irregular spelling.

The gains in language age were related directly to the duration of the PLDK treatment. These results take on added significance when they are viewed in connection with school achievement. The increase in language development did appear to be associated with improved school achievement.

The results of intellectual development are less encouraging. Two years of PLDK resulted in greater gains in MA than one year in the overall picture, but neither was superior to the control group. Furthermore, none of the IQ gains were significant. The results do indicate that Level #1 PLDK is especially suited to boys, whereas Level #2 PLDK appears to favor girls. Finally, the decrement in intellectual growth after two years among the subjects who had only one year of PLDK is a matter of concern and needs further study.

CHAPTER IV

THE USE OF DIFFERENT PERSONNEL IN STIMULATING ORAL LANGUAGE DEVELOPMENT

The purpose of this aspect of the study was to evaluate the effectiveness of the PLDK taught by different kinds of personnel. All groups were taught reading using a conventional basal reading approach in traditional orthography. In the first year of the study Dunn and Mueller (1966) found that there were no basic differences in achievement, intellectual development, or language development between the classes taught as an intact group versus those divided into two smaller groups. Based on these findings, these groups were combined for the second year analyses. Thus, the analyses contrasted the differences between the regular teacher, a team approach utilizing the regular teacher and a visiting teacher, and the regular teacher plus a community volunteer. Only those subjects who had two years of PLDK were included in the analyses.

Procedures

From the 384 subjects in the final subject pool, a selected study sample of subjects who had received two years of PLDK was established. This was done by deleting subjects who did not meet criteria set up for disadvantaged (see p. 17) and then by randomly selecting proportional samples of subjects from each of the three treatments groups. The study sample consisted of 88 subjects with equal numbers of boys and girls (see Table 14). The analyses of variance of the pretest data indicated significant differences between groups in IQ, MA, and LA (See Table 15).

Basic home information suggested that the educational level of the parent*, the number of members in the family, and the type of housing were comparable (Table 16). The subjects were drawn from 10 classrooms involved in the second year PLDK treatment. Two of these classrooms overlapped the ITA aspect of the study (reading in T.O. plus two years PLDK by regular teacher). Four classes were taught PLDK by the regular teacher, four by a team approach, and two by the teacher plus a community volunteer.

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* The highest level of education of either parent was used.

Table 15

Summary of Pretest Data of the Selected Samples by Treatment Group

Treatment Group	N	CA		IQ		MA		LA	
		$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S	$\overline{X}$	S
Regular									
Boys	15	79.07	4.56	91.67	7.99	73.13	6.95	69.87	7.32
Girls	15	75.40	5.98	86.87	10.49	66.13	6.23	62.53	6.93
Total	30	77.23	5.55	89.27	9.48	69.63	7.40	66.20	7.93
Team									
Boys	22	76.32	5.62	82.45	11.93	63.59	7.11	60.91	9.47
Girls	22	75.95	5.19	77.73	10.06	59.91	6.44	57.86	8.01
Total	44	76.14	5.97	80.09	11.16	61.75	6.96	59.39	8.80
Volunteer									
Boys	7	74.28	5.50	87.43	9.98	65.57	6.40	63.57	11.13
Girls	7	78.28	5.88	87.43	12.12	69.43	9.93	65.28	11.46
Total	14	76.28	5.85	87.43	10.67	67.50	8.27	64.43	10.89
Totals	88	76.51	5.77	84.39	11.30	65.35	8.12	62.51	9.34

Results

Results from this aspect of the study after two years are reported for school achievement, language development, and achievement.

School Achievement

Grade equivalent scores from the MAT are presented in Table 17 for the total sample and for the three sub-groups. Results from the analyses of covariance (to remove the effect of IQ differences) for word knowledge, word discrimination, reading, and spelling are reported in Tables 19, 20, 21, and 22 respectively. There were no significant differences among the treatment groups. In all cases, the girls did significantly better than the boys.

Language Ability

Pretest, posttest, and gain scores for the ITPA are presented in Table 23 for all groups. Results from the analysis of covariance for LA gain scores are reported in Table 24. As with achievement, there were also no significant differences among the personnel groups. In contrast to achievement, however, there was no significant difference between boys and girls in language development. These findings were confirmed also by the analysis of the PLPI raw scores (Table 25).

Intellectual Ability

Pretest, posttest, and gain scores from the Stanford-Binet for IQ and MA are reported in Table 23. The analyses for IQ and MA are reported in Tables 26 and 27. There were no significant differences among treatments, or between boys and girls on either of these measures.

Discussion

This aspect of the study was designed to evaluate the effect of different types of instructional personnel on teaching the PLDK. The effectiveness of the various treatments was evaluated in terms of school achievement, language development, and intellectual development. After one year, there were basically no differences in group size aspect. Therefore, in the second year, an evaluation was made only among the kinds of personnel used: i.e., between the regular teacher, a team approach, and regular teacher plus a community volunteer. The second year results replicated findings from the first year. In teaching the PLDK, different types of teaching personnel and teaching procedures appear to be equally effective. The practical implications from these findings are that: (1) the regular classroom teacher can conduct the oral stimulation lessons effectively, or (2) community helpers, without professional training, can be used advantageously in such a program, or (3) teachers can work as a team to allow for greater flexibility in the curricular program of the school.

Table 16

Analysis of Variance of Pretest Data by Treatment Group

Variable	Source of Variation	Degree of Freedom	Sum of Squares	Mean Squares	F ratio
CA	Between groups	5	180.780	36.156	1.231
	Within groups	82	2409.118	29.3794	
	Total	87	2589.898		
IQ	Between groups	5	2074.550	414.910	3.769*
	Within groups	82	9026.314	110.077	
	Total	87	11100.864		
MA	Between groups	5	1754.048	350.810	7.213*
	Within groups	82	3988.032	48.634	
	Total	87	5742.080		
LA	Between groups	5	1404.970	280.994	3.726*
	Within groups	82	6183.019	75.403	
	Total	87	7587.989		

*$F_{.95} = 2.37$

Table 17

Basic Home and Family Information on the Selected Sample

Group	Percentage of Family on Welfare	Average No. of Children per Family	Average No. of Adults per Family	Mean* Educ. Level of Parent	Housing Conditions in Percentage			
					extremely poor	moderately poor	fair	good
Regular Teacher								
Boys	23	4.4	2.7	10.9	7	-	93	-
Girls	7	3.4	2.3	10.7	-	14	84	-
Total	14	3.9	2.5	10.8	3	7	89	-
Team Teaching								
Boys	15	6.4	2.1	10.5	30	55	15	-
Girls	26	5.0	1.9	9.9	30	55	15	-
Total	21	5.7	2.0	10.2	30	55	15	-
Volunteer								
Boys	-	5.0	2.1	10.3	71	-	29	-
Girls	-	4.3	2.6	10.4	-	14	86	-
Total	-	5.0	2.4	10.4	36	7	57	-
Grand total	15	4.9	2.2	10.4	21	30	49	-

*Educational level of the best educated parent

Table 18

Means and Standard Deviations for School Achievement Data (Grade Equivalent Scores) As Measured by the Metropolitan Achievement Test

		MAT							
		WK		WD		R		S	
Treatment Group	N	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
Regular									
Boys	15	2.340	.677	2.187	.649	2.553	.899	2.593	.850
Girls	15	2.513	.548	2.880	.783	2.733	.697	2.980	.905
Total	30	2.427	.611	2.533	.790	2.643	.796	2.787	.885
Team									
Boys	22	2.136	.483	2.445	.788	2.127	.448	2.341	.863
Girls	22	2.164	.498	2.695	.916	2.357	.674	2.586	.994
Total	44	2.15	.485	2.570	.854	2.243	.577	2.464	.928
Volunteer									
Boys	7	1.943	.503	2.271	.765	2.271	.489	2.057	1.088
Girls	7	2.500	.762	2.500	.934	2.743	.826	2.500	1.198
Total	14	2.221	.684	2.386	.829	2.507	.697	2.278	1.123
Total									
Boys	44	2.175	.563	2.330	.732	2.295	.657	2.382	.893
Girls	44	2.336	.575	2.727	.865	2.548	.715	2.707	.995
Total	88	2.256	.572	2.528	.822	2.422	.695	2.544	.954

Table 19

Analysis of Covariance of Word Knowledge Subtest of Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(Method of instruction)	2	1.385	1655.932	43.549	.383	2	.191	.679
B(Sex)	1	.573	352.000	-14.200	1.225	1	1.225	4.345*
A x B	2	.747	66.618	6.542	.476	2	.238	.844
Errors	82	25.713	9026.314	160.816	22.848	81	.282	
Total	87	28.417	11100.864	196.707	24.932			

$^*F_{.95} = 4.00$

Table 20

Analysis of Covariance of Word Discrimination Subtest of Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(Method of instruction)	2	.364	1655.932	-13.303	.703	2	.351	.549
B(Sex)	1	3.480	352.000	-35.000	4.166	1	4.166	6.511*
A x B	2	.996	66.618	-2.960	1.371	2	.685	1.071
Errors	82	53.880	9026.314	135.898	51.834	81	.640	
Total	87	58.719	11100.864	84.634	58.074			

$^*F_{.95} = 4.00$

Table 21

Analysis of Covariance of Reading Subtest of Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(Method of instruction)	2	2.978	1655.932	69.828	.619	2	.309	.784
B(Sex)	1	1.400	352.000	-22.200	2.703	1	2.703	6.850*
A x B	2	.212	66.618	3.665	.000	2		
Errors	82	37.379	9026.314	221.073	31.965	81	.395	
Total	87	41.969	11100.864	272.366	35.286			

$^*F_{.95} = 4.00$

Table 22

Analysis of Covariance of Spelling Subtest of Metropolitan Achievement Test

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(Method of instruction)	2	3.037	1655.932	39.412	2.130	2	1.065	1.252
B(Sex)	1	2.324	352.000	-28.600	3.714	1	3.714	4.367*
A x B	2	.147	66.618	1.916	.064	2	.032	.038
Errors	82	73.650	9026.314	207.364	68.886	81	.850	
Totals	87	79.157	11100.864	220.093	74.794			

$^{*}F_{.95} = 4.00$

Table 23

Pre, Post and Gain Scores on Intellectual and Language Development
for the Selected Samples by Treatment Group

Treatment Group	N		SB-IQ			SB-MA			ITPA-LA		
			Pretest	Posttest	Gain	Pretest	Posttest	Gain	Pretest	Posttest	Gain
Regular											
Boys	15	$\bar{X}$	91.67	94.27	2.60	73.13	95.87	22.73	69.87	96.40	26.53
		S	7.99	12.35		6.95	10.27		7.32	8.71	
Girls	15	$\bar{X}$	86.87	96.27	9.40	66.13	93.33	27.20	62.53	88.53	26.00
		S	10.49	17.37		6.23	14.07		6.93	11.62	
Total	30	$\bar{X}$	89.27	95.27	6.00	69.63	94.60	24.97	66.20	92.47	26.27
		S	9.48	14.84		7.40	12.17		7.93	10.86	
Team											
Boys	22	$\bar{X}$	82.45	90.73	8.27	63.59	90.00	26.41	60.91	82.45	21.54
		S	11.93	11.61		7.11	10.45		9.47	13.17	
Girls	22	$\bar{X}$	77.73	85.41	7.68	59.91	84.14	24.23	57.86	80.04	22.18
		S	10.06	12.65		6.44	10.74		8.01	14.34	
Total	44	$\bar{X}$	80.09	88.07	7.98	61.75	87.07	25.32	59.39	81.25	21.86
		S	11.16	12.30		6.96	10.88		8.80	13.66	
Volunteer											
Boys	7	$\bar{X}$	87.43	94.86	7.43	65.57	91.28	25.71	63.57	91.57	28.00
		S	9.98	12.43		6.40	10.53		11.13	10.69	
Girls	7	$\bar{X}$	87.43	87.43	0.00	69.43	87.71	18.28	65.28	90.28	25.00
		S	12.12	14.25		9.93	13.00		11.46	18.14	
Total	14	$\bar{X}$	87.43	91.14	3.71	67.50	89.50	22.00	64.43	90.93	26.50
		S	10.67	13.41		8.27	11.51		10.89	14.32	
Totals	88	$\bar{X}$	84.39	91.01	6.62	65.35	90.02	24.76	62.51	86.61	24.10
		S	11.30	13.63		8.12	11.81		9.34	13.84	

Table 24

Analysis of Covariance of Language Age as Measured by the Illinois Test of Psycholinguistic Abilities

Source of Variation	Degree of Freedom	Sum of Squares y	Sum of Squares x	Sum of Products xy	Corrected Sum of Squares y	Degree of Freedom	Mean Squares	F ratio
A(Method of instruction)	2	441.531	1655.932	842.111	132.439	2	66.220	.827
B(Sex)	1	2.557	352.000	30.000	11.245	1	11.245	.140
A x B	2	35.531	66.618	-43.891	53.958	2	26.979	.337
Errors	82	6962.461	9026.314	2070.303	6487.610	81	80.094	
Total	87	7442.080	11100.864	2898.523	6685.253			

$*F_{.95} = 4.00$

Table 25

Analysis of Variance of Raw Scores on the Peabody Language Production Inventory

Source of Variation	Degree of Freedom	Sum of Squares y	Mean Squares	F ratio
PLPI				
A (Method of instruction)	2	89.537	44.768	.325
B (Sex)	1	3.682	3.682	.027
A x B	2	91.351	45.675	.331
Errors	82	11302.522	137.836	
Total	87	11487.091		

$*F_{.95} = 4.00$

Table 26

Analysis of Variance of IQ Gains on the Stanford-Binet Intelligence Scale

Source of Variation	Degree of Freedom	Sum of Squares y	Mean Squares	F ratio
IQ				
A (Method of instruction	2	210.790	105.395	.887
B (Sex)	1	15.557	15.557	.131
A x B	2	528.227	264.113	2.223
Errors	82	9738.051	118.757	
Total	87	10492.625		

$^{*}F_{.95} = 4.00$

Table 27

Analysis of Variance of MA Gains on the Stanford-Binet Intelligence Scale

Source of Variation	Degree of Freedom	Sum of Squares y	Mean Squares	F ratio
MA				
A (Method of instruction)	2	120.931	60.466	.564
B (Sex)	1	12.375	12.375	.115
A x B	2	382.405	191.202	1.784
Errors	82	8785.732	107.143	
Total	87	9301.443		

$^*F_{.95} = 4.00$

CHAPTER V

SUMMARY AND CONCLUSIONS

Inner-city disadvantaged children encounter many difficulties in achieving school success. At this time, the need for special intervention techniques to help them attain greater success in school is clearly evident, but the areas of intervention and the techniques required are less clear. The investigators in this study assumed that language and reading were the two initial areas where special intervention might lead to improved educational adjustment.

Purpose

The purpose of this three-year Cooperative Language Development Project was to examine the efficacy of an oral language development program and an experimental reading program in improving the academic achievement, language development, and intellectual functioning of disadvantaged children in the primary grades. This monograph reports on the results after the first two years.

The experimental treatments were: (1) an oral language program consisting of experimental versions of the Level #1 PLDK for the first grade, and Level #2 PLDK for the second grade, and (2) an experimental reading approach utilizing the _Early-to-Read i/t/a_ program followed by the _Basic Reading series_. In contrast to the experimental groups, a control group used a conventional basal reading program (Houghton Mifflin) in traditional orthography (T.O.) and received no organized oral language stimulation.

The objectives of the study were twofold. The first was designed to evaluate the effectiveness of the ITA and PLDK. The second was designed to evaluate the relative effectiveness of different instructional personnel in teaching the daily oral language stimulation exercises. It was predicted that: (1) the use of ITA alone in beginning reading would enhance reading ability; (2) the use of PLDK alone would raise intellectual quotients, as well as enhancing oral language development and school achievement; (3) the use of ITA plus PLDK would be even more effective in fostering verbal intelligence, language development, and school achievement; (4) the use of PLDK for two years would be more effective than using it for one year, and (5) no significant differences would develop among different personnel teaching the PLDK lessons.

Subjects

Experimental subjects were drawn from eight schools and control subjects from six schools. These schools served areas where the majority of children are classified as disadvantaged. There were 31 first grade classrooms in the experimental treatments during the first year (1964-65) and 30 second grade classrooms during the second year (1965-66). For the second year, complete data were available on 384 subjects--343 experimental and 41 control subjects. From this subject pool, selected samples of equal or proportional size were drawn for the analyses.

The effectiveness of the programs was evaluated in terms of academic, linguistic, and intellectual development. School achievement was evaluated by means of the Metropolitan Achievement Test (MAT), Primary Battery II. The language measures were the Illinois Test of Psycholinguistic Abilities (ITPA) and the Peabody Language Production Inventory (PLPI). The Stanford-Binet Intelligence Scale (S-B) was used to evaluate intellectual growth.

Procedures

As a result of the findings from the first year, several groups were combined for the second year analyses. Two primary analyses were conducted. In one analysis the performance of the following groups was compared:

(1) reading in ITA without PLDK.
(2) reading in ITA plus PLDK for one year taught by the classroom teacher.
(3) reading in T.O. plus PLDK for one year taught by the classroom teacher.
(4) reading in ITA plus two years PLDK taught by the classroom teacher.
(5) reading in T.O. plus two years PLDK taught by the classroom teacher.

In the analysis involving the type of instructional personnel only groups of children taught the PLDK were included. These groups comprise the following:

(1) reading in T.O. plus PLDK for two years taught by the regular classroom teacher.
(2) reading in T.O. plus PLDK for two years taught by a team teaching approach.
(3) reading in T.O. plus PLDK for two years taught by the regular teacher and a community volunteer.

The experimental teachers were given a number of incentives which included a small salary supplement, in-service training sessions, supervision and observation, and additional materials. Motivation to excellence in teaching was noted among the experimental teachers, whereas the control teachers had no stimulation from the project staff other than knowing that the progress of their children was being monitored. Thus, the Hawthorne effect cannot be ignored in considering the results.

Results

Analysis of covariance (to control for IQ differences among groups) was used to contrast treatments, with t tests employed to contrast differences between sub-groups. The results of the analyses examining the effectiveness of the ITA and PLDK were as follows:

1. The most effective treatment for enhancing reading achievement was the combination of ITA plus two years PLDK. In all cases, girls excelled boys in reading achievement.

2. When all groups are considered, children learning to read using ITA made significantly higher scores in reading than those learning to read in T.O. However, the ITA group without PLDK did not achieve at a higher level than the control group in T.O. The controls excelled the ITA only group on word discrimination, and there were no differences between these two groups on word knowledge or reading.

3. Children receiving PLDK for two years did better in reading than those receiving no PLDK or PLDK for one year.

4. Those children who received PLDK performed at a higher level than the no PLDK children on spelling. The two year PLDK treatment was more effective than one year, and girls surpassed boys. However, the control group did as well in spelling as the two year PLDK group.

5. In terms of language development those children receiving either one or two years PLDK made greater gains than children not receiving PLDK. Also, the use of PLDK for two years had greater facilitating effect than using it for one year.

6. For the overall experimental group, two years of PLDK enhanced intellectual development in terms of MA growth appreciably over no PLDK or one year of PLDK, but not in terms of IQ gains. However, there was no difference between the control group and the two year PLDK group. There were differential effects between the ITA and T.O. reading groups, as well as between boys and girls resulting from the use of PLDK. For the ITA groups, two years PLDK was more effective than one year with both being superior to the no PLDK group. However, among the T.O. groups, the one year PLDK groups made the lowest gain. The Level #1 PLDK was more effective for boys, while the girls made greater gains than the boys after two years of PLDK.

The second aspect of the study investigated the relative effectiveness of the PLDK taught by different personnel, namely, the regular teacher, a team teaching arrangement consisting of the regular teacher and a visiting teacher, and the regular teacher with the help of a community volunteer. There were no significant differences among the various treatments in school achievement, language development, or intellectual functioning.

Conclusions

After two years of intervention, the combination of ITA plus two years PLDK appears to be the most effective treatment in enhancing the overall reading and language performance of disadvantaged children. In the first year (1964-65) the ITA only group did better than the controls in reading achievement, but after two years (1964-66) there were no differences between the two groups. In fact, in the one instance, a difference was significant in favor of the control group. It is plausible to conclude that the Hawthorne effect was operating for the ITA group during the first year, and that this diminished in the second year. When this reversal of findings for ITA without PLDK is considered in conjunction with the superior performance of ITA plus two years PLDK, it furnishes support for combining ITA with PLDK.

At this time, the beneficial effects of the PLDK on intellectual functioning is questionable. The PLDK groups made greater MA gains than the controls, but not greater IQ gains. In addition, the decrement in IQ scores of the one year PLDK group after two years is a matter of concern.

These findings, while heartening, should be viewed with caution on two counts. First, it remains to be demonstrated that the increments in favor of ITA and PLDK will last through the children's third year in school. Furthermore, we plan to follow-up the children at the end of their fourth year in school. Second, we are replicating this study through our Cooperative Reading Project where equal inducements are provided the teachers in T.O. approaches to reading. Preliminary findings do not suggest the same superiority of ITA as was demonstrated in this first research project. However, until evidence countersuggests, the ITA and PLDK appear to hold promise for Southern inner-city slum children, particularly for Negro youth who bring to the school: (1) reduced functioning in verbal intelligence, (2) a restricted and non-standard form of English, and (3) an inability to articulate clearly many speech sounds. For such pupils an elemental phonetic approach to beginning reading using the ITA sound symbol system seems to hold much promise, especially when combined with oral language stimulation exercises from the Peabody Language Development Kits.

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APPENDIXES

Appendix A

Teacher Rating Schedule,
Occupational Guidelines, and
Outline of Teacher's Annual Report

COOPERATIVE READING PROGRAM
Teacher Rating Schedule

Teacher ________________ School ____________________

Approach ________________ Observer ________________ Date ___________

Time: Observation began __________ ended ____________

1. Overall Rating

poor	fair	satisfactory	good	excellent

Comments:

2. Classroom Control--Psychological

chaotic	disorderly	supportive	fairly inflexible	authoritarian

Comments:

3. Classroom Control--Instructional (appropriate use of time) (Purposeful independent activities)

very few children	some children	about half the children	most children	all children

Comments:

Teacher Rating Schedule (continued)

4. Reading Instruction

________	________	________	________	________
poor	fair	satisfactory	good	excellent

Comments:

5. Instructional Level

________	________	________	________	________
too easy		appropriate		too difficult

Comments:

6. Lesson Objectives

________	________	________	________	________
obscure		fairly clear		clear

Comments:

7. Pupil Materials Used: (List)

8. Teacher Materials Used: (List)

9. Non-approach Materials Observed:

Teacher Rating Schedule (continued)

10. Pupil motivation and interest in the reading program

________	________	________	________	________
poor	fair	satisfactory	good	excellent

Comments:

11. Teacher motivation and interest in the reading program

________	________	________	________	________
poor	fair	satisfactory	good	excellent

Comments:

PEABODY CULTURAL OPPORTUNITY SCREENING SCALE 65-66 Rev.

GUIDELINES

I. Housing Conditions: check the one item which best describes the dwelling unit in which the child resides.

II. Child Rearing

A. 1. Responsibility: check the one item which best describes the person who is in charge of raising the child. If this person holds some other relationship to the child than those offered (e.g. foster mother, father) specify that relationship.

2. Age: check the age range within which II.A.1. falls.

3. Education: circle the number indicating the highest grade completed by II.A.1. Numbers 1, 2, 3 and 4 following the (u) indicate the number of undergraduate years completed and 1, 2, and 3 after the (g) indicate the graduate years.

4. Employment: check both whether II.A.1. works outside the home and the item which best describes the number of days II.A.1. is engaged in such employment during the week.

B. 1. Father: check the one person who acts as the male surrogate to the child. If this person falls in some category not listed, specify their relationship to the child (e.g. friend, uncle).

III. General Family Information

A. 1. Number of persons: circle the total number of adults and children, including the pupil, who reside in the same dwelling unit as the child.

B. 1. Number of rooms: circle the number of rooms which make up the living quarters of the dwelling unit in which the child lives, remembering to exclude halls, closets, ect.

C. 1. Education: circle the number indicating the highest grade completed by III.A.1.

2. Relationship: check the item which gives the relationship of III.C.1. to the child. If this person holds some other relationship to the child than those offered (e.g. grandmother, friend) specify that relationship.

IV. Family Income

A. 1. Welfare: if the family has received any public assistance in the last year, check ______yes.

Peabody Cultural Opportunity Screening Scale (continued)

B. 1. Combined gross annual income: check the range within which the sum of all the money earned or received by all members of the family in the last year falls. Remember to include public assistance of any kind.

C. 1. Main wage earner: check the item which indicates which member of the family had the largest income last year.

OCCUPATION CLASSIFICATIONS

(primarily derived from the Dictionary of Occupational Titles and its companion book on occupational classifications)

Private household service workers

Private household service workers are involved primarily with the maintenance of homes, their grounds, etc. They are engaged in tasks associated with, for example, cooking meals, caring for children, or caring for the house or yard.

dayworker
houseman
maid
yardman
laundress
butler
cook
companion
housekeeper
nursemaid
babysitter
caretaker

Non-household personal service workers

Personal service workers are involved primarily with services which are given directly to people, hence a major defining characteristic of the work performed by them is that they are in direct contact with the persons to whom they render service and that this service is often designed to make them more comfortable.

barmaid
cook
bartender
waitress
bellhop
kitchen worker
hospital attendant
hotel or motel maid
counterman

Community service workers

Community service workers are involved primarily with services rendered to the community.

crossing guard
attendant
social worker
meter maid
night watchman
postman
policeman
fireman
probation officer

Peabody Cultural Opportunity Screening Scale (continued)

Non-household maintenance service workers

Non-household maintenance service workers are primarily involved in the upkeep of businesses and industrial property. This would include the grounds as well as the physical plant and the equipment of such organizations.

cleaning woman
porter
park keeper
janitor
busboy
road repairman
elevator operator
refuse collector
street cleaner

Day laborers

Day laborers perform simple duties which may be learned in a short time and which require the exercise of little or no independent judgment. Usually no previous experience is required for such employemnt. They are unskilled.

car washer
industrial worker
tobacco picker
food handler
truck loader
shop helpers
construction worker
parking lot attendant
stock boy (in a supermarket, etc.)

Semi-skilled laborers

Semi-skilled laborers perform manual tasks which are less dependent upon dexterity than on vigilance and alertness. They exercise independent judgment which is limited to their task and no broad knowledge of their field is required. Their tasks generally require a high order of manipulative ability and are limited to a well defined work routine.

laundry worker
chauffeur
route man
signalman
truck driver
delivery man
sewing machine operator
coin machine filler
service station attendant

Skilled workers

Skilled workers perform tasks which require a thorough and comprehensive knowledge of the field in which they work, a considerable judgment and a high degree of dexterity. Often they are responsible for the care of valuable equipment. Their jobs usually require extensive training; e.g. apprenticeships or schooling.

dressmaker
auto mechanic
plumber
butcher
seamstress
welder
sheet metal worker
chief baker
bricklayer
painter
photographer
bookbinder

Peabody Cultural Opportunity Screening Scale (continued)

Clerical and sales workers

Clerical and sales workers' duties involve the preparation, transcribing, transferring, systematizing, or preserving of written communications and records in offices, shops, etc.

saleswoman
bookkeeper
cashier
office clerk
timekeeper
telegraph messenger
office machine operator
telephone operator
shipping and receiving clerk

Professional, technical and managerial workers

Professional, technical and managerial workers' occupations require a high degree of mental activity and are concerned with the theoretical or practical aspects of complex fields of endeavor. They require extensive and comprehensive academic study and/or great experience.

nurse
doctor
lawyer
teacher
accountant
electrical engineer
musician
laboratory technician
office or business manager

Tentative Outline of Teacher's Annual Report

I. General Observations of the Class

This section should describe:

1. the type of classroom you have had this year (size, light, equipment, noise level, etc.);
2. the pupils in your class (numbers, sex distribution, pupil drop-outs and additions, the socio-economic conditions of the children, etc.); and
3. the classroom atmosphere and some of the factors which may have accounted for it.

II. Experimental Method of Teaching Reading Employed

This section should describe how you have taught reading this year. Included should be a description of teaching aids, prescribed text or supplementary book, etc. which were used.

III. Experimental Language Development Activities (if used)

This section should be completed by only those teachers using the Peabody Language Development Kit. Included in this section might be a discussion of the strengths, weakenesses and usefulness of the PLDK.

IV. Observation of the Class Responses to the Experimental Treatment(s)

This section should give your observation and evaluation of the effect of the experimental treatment upon the childrens' language and intellectual behavior. It should be divided into four subsections. The first subsection should cover the period from the beginning of the school year till the Christmas holidays, the second subsection the period between the Christmas holidays and the Easter vacation, and the third subsection the rest of the school year. The last subsection should give an overall evaluation and conclusion.

V. Impacts Upon the Teacher

This section is for you to describe the impacts of the experimental program upon your professional outlook, skills and attitude whether positive or negative. Tell frankly what you think of the treatments and what, if anything, you would use from them in your future years of teaching after the experiment is over.

Appendix B

Raw Data

Appendix

RAW DATA

Number	Variable
1.	Chronological Age
2.	Stanford-Binet Intelligence Quotient
3.	Stanford-Binet Mental Age
4.	Peabody Picture Vocabulary Test IQ
5.	Peabody Picture Vocabulary Test MA
6.	Illinois Test of Psycholinguistic Abilities Standard Score
7.	Illinois Test of Psycholinguistic Abilities Language Age *
8.	ITPA: Auditory Decoding LA
9.	ITPA: Visual Decoding LA
10.	ITPA: Auditory-Vocal Association LA
11.	ITPA: Visual-Motor Association LA
12.	ITPA: Vocal Encoding LA
13.	ITPA: Motor Encoding LA
14.	ITPA: Auditory-Vocal Automatic LA
15.	ITPA: Auditory-Vocal Sequencing LA
16.	ITPA: Visual Motor Sequencing LA
17.	Peabody Language Production Inventory Raw Score
18.	Metropolitan Achievement Test: Word Knowledge Grade Equivalent Score
19.	MAT: Word Discrimination Grade Equivalent Score
20.	MAT: Reading Grade Equivalent Score
21.	MAT: Arithmetic Grade Equivalent Score
22.	MAT: Spelling Grade Equivalent Score

*Age scores are recorded in months.

Section I: Without PLDK

Group I: ITA

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
1	2	73	79	59	78	54	-.87	65	85	80	42
		80	87	71	71	55	-2.35	62	55	75	50
		85	82	80			-1.77	74	55	105	78
2	1	75	69	54	70	47	-2.91	59	81	70	47
		83	68	59	69	54	-2.09	62	65	70	59
		85	80	78			-3.00	64	57	87	70
3	2	72	91	66	59	42	.76	66	55	75	78
		81	98	80	91	74	1.55	67	65	70	78
		91	100	92			.48	87	106	87	87
4	1	79	90	72	108	94	1.16	69	62	87	63
		86	104	90	102	87	-.43	78	71	105	82
		98	104	104			-.11	91	68	105	92
5	2	75	91	69	87	61	1.10	64	62	87	56
		83	90	76	83	66	-1.73	66	60	94	63
		85	80	78			-.43	88	55	105	92
6	2	79	109	86	97	80	-.60	73	65	94	78
		86	109	94	104	89	-.81	84	68	87	99
		99	107	108			1.08	112	106	105	108
7	1	76	97	74	40	36	-1.97	64	53	80	66
		85	88	76	77	61	-1.37	69	57	105	70
		97	80	80			-1.40	78	62	62	87
8	2	73	111	80	97	70	.95	79	77	75	78
		82	102	84	93	76	-1.19	70	53	105	82
		94	100	96			-.75	84	73	87	99
9	1	71	121	84	125	98	2.31	93	106	105	82
		80	124	98	134	124	.70	84	57	105	99
		92	112	104			1.34	112	106	105	108
10	1	75	77	54	102	74	-2.69	53	57	87	53
		83	71	61	91	74	-2.41	60	53	75	66
		96	77	76			-2.15	71	106	105	87
11	1	69	63	46	32	34	-3.00	40	29	32	32
		77	84	66	67	46	-3.00	52	106	53	32
		89	72	66			3.00	59	81	70	42
12	1	71	91	64	88	50	-.87	65	106	75	50
		78	97	76	91	74	-1.66	66	68	80	63
		90	82	76			-.65	85	77	105	82
13	1	79	80	65	65	50	-2.22	63	71	75	59
		88	87	78	73	57	-2.31	71	65	70	63
		100	88	90			-2.61	75	60	80	78
14	1	72	100	72	91	64	-.64	67	85	70	70
		80	91	74	81	64	.14	79	85	80	82
		92	87	82			-.59	86	90	66	78

11	12	13	14	15	16	17	18	19	20	21	22
40	79	65	55	75	68	87					
40	64	65	64	67	88	49	1.6	1.4	1.3	1.0	
65	107	55	69	75	76	63	1.9	2.7	1.7	1.8	1.9
61	64	55	42	58	47	60					
52	64	65	51	67	61	62	1.3	1.3	1.5	1.0	
61	79	60	51	50	68	70	1.9	1.5	1.8	1.0	1.0
69	64	60	55	84	61	58					
61	68	38	64	71	88	56	2.2	3.6	1.9	1.8	
99	76	33	100	102	101	47	2.7	3.6	2.0	2.4	2.6
69	68	95	60	75	68	70					
78	72	95	82	64	81	61	2.2	2.8	1.7	1.7	
99	107	104	100	71	64	71	2.3	2.4	2.0	2.5	2.3
69	64	55	28	84	72	58					
73	72	60	33	79	64	55	1.7	1.8	1.9	1.1	
111	107	76	64	102	94	63	2.8	3.6	2.2	2.3	3.0
78	76	55	64	75	94	64					
103	83	82	87	71	88	58	2.9	3.9	3.2	1.5	
111	107	95	100	79	108	62	4.2	4.9	3.7	2.9	4.7
61	68	70	46	94	55	62					
69	76	70	60	71	64	62	1.3	1.3	1.6	1.0	
86	107	95	60	71	68	70	1.5	1.5	2.0	1.2	1.0
99	79	104	73	61	88	58					
86	64	70	60	75	68	62	1.8	3.1	1.8	1.7	
90	107	104	82	84	72	65	2.5	2.2	2.1	2.7	2.2
56	107	104	78	102	76	82					
94	93	104	73	88	68	59	1.8	2.8	1.9	1.9	
103	107	104	87	102	72	80	4.2	4.6	3.3	4.0	2.7
52	34	76	33	41	55	20					
56	83	70	46	41	61	58	1.6	1.4	1.6	1.0	
56	68	65	82	45	64	47	1.7	1.4	1.9	1.3	1.3
56	27	42	37	58	50	22					
48	34	46	37	55	55	19	1.1	1.0	1.0	1.0	
78	49	65	28	52	64	63	1.5	1.4	1.3	1.0	1.0
61	93	60	64	50	44	59					
52	79	82	73	58	55	63	1.4	1.3	1.5	1.0	
103	107	104	96	55	64	73	1.4	1.4	1.8	1.0	1.0
65	53	42	28	84	81	60					
90	61	55	69	111	88	64	1.4	1.4	1.7	1.0	
73	68	70	69	94	108	61	2.1	1.6	1.9	2.1	1.0
56	76	70	78	52	52	63					
90	93	65	87	67	68	59	1.9	2.2	1.5	1.5	
94	107	88	91	79	88	68	2.9	2.4	2.1	2.7	2.2

Section I: Without PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
15	2	72	110	78	100	71	-.87	65	68	66	66
		79	112	88	83	66	.02	78	106	87	70
		91	111	102			-.65	85	90	94	108
16	2	68	84	58	74	50	1.08	59	62	62	63
		76	88	68	80	55	-1.29	69	68	70	59
		88	84	76			-1.56	76	106	53	82
17	2	75	112	83	100	71	.62	73	71	53	82
		83	103	86	102	87	-1.28	69	71	66	78
		95	112	108			-.54	86	71	75	108
18	1	78	89	70	91	74	.08	79	65	94	78
		86	82	72	91	74	-.56	77	60	105	78
		98	100	100			.81	106	85	105	108
19	2	78	76	61	69	46	-1.54	67	71	70	66
		86	80	71	69	54	-1.10	71	55	87	73
		99	80	82			-1.56	76	55	105	78
20	2	78	89	70	40	38	-1.54	67	65	53	59
		85	100	86	93	76	-1.46	68	62	80	78
		97	82	82			-1.40	78	40	94	87
21	1	74	109	80	104	76	1.01	80	74	87	82
		80	110	88	100	84	1.64	112	106	105	92
		95	112	108			1.29	112	106	105	99
22	1	68	79	55	72	48	-1.18	58	85	75	44
		77	96	74	80	55	-1.73	66	77	80	66
		98	74	75			-.59	86	55	105	78
23	2	78	87	69	69	54	-2.85	59	65	57	59
		87	83	74	75	59	-1.82	65	57	80	70
		99	80	82			-1.08	81	55	80	87
24	2	77	96	74	93	66	-.79	72	73	75	87
		87	100	88	89	71	.34	88	106	87	82
		97	105	106			.16	95	55	62	92
25	1	68	92	63	85	59	-1.81	53	46	40	44
		75	93	70	78	54	-2.97	58	55	70	53
		89	79	72			-1.51	77	77	53	78
26	2	71	70	52	80	55	-1.95	58	51	53	53
		78	77	62	65	50	-2.22	63	55	80	50
		91	81	76			-2.96	65	60	75	73
27	1	71	94	67	85	59	-1.44	62	53	57	73
		80	104	83	83	66	2.32	100	90	80	87
		92	107	100			.70	104	90	105	92
28	2	71	77	56	43	37	-1.44	62	51	75	53
		80	89	72	81	64	-1.85	65	55	70	53
		91	93	86			-.38	88	90	80	73

11	12	13	14	15	16	17	18	19	20	21	22
69	61	55	46	75	76	35					
107	31	76	78	84	81	22	2.9	3.9	3.9	2.4	
65	79	82	91	102	72	69	3.9	4.3	4.2	3.2	4.9
65	61	38	33	67	64	49					
73	88	60	60	64	81	59	1.6	2.1	1.8	1.0	
86	83	35	87	75	94	61	1.8	2.2	2.2	1.9	2.2
90	68	70	69	84	76	66					
99	46	50	87	71	64	68	2.7	3.9	2.8	2.0	
111	83	60	87	79	108	64	3.7	4.6	4.2	3.7	4.7
40	93	104	60	102	76	88					
86	64	104	78	67	81	80	2.7	3.6	3.4	1.8	
90	107	104	96	88	108	77	3.5	4.6	3.8	3.5	4.0
86	38	42	55	102	76	9					
82	72	50	69	84	88	31	2.7	2.4	1.9	1.2	
86	64	38	91	102	94	51	2.2	2.4	2.1	2.2	2.0
78	57	50	82	94	72	35					
61	53	50	87	79	68	60	1.9	2.8	2.0	1.4	
103	79	65	96	94	81	55	2.7	3.9	2.3	3.2	2.2
90	107	76	82	64	76	38					
103	79	76	100	102	108	59	3.2	3.9	3.7	3.6	
111	107	95	114	102	108	68	4.6	4.6	4.9	4.0	4.8
73	53	33	46	61	50	46					
86	57	30	60	71	68	69	2.0	3.6	1.9	1.8	
99	107	104	82	102	61	65	3.0	2.9	2.6	1.6	2.9
82	49	42	46	52	72	55					
48	72	55	60	64	81	57	2.2	2.8	1.8	1.3	
94	107	55	82	102	76	63	2.7	3.4	3.0	2.1	3.6
52	79	88	69	102	76	72					
90	79	60	64	102	108	63	2.9	3.6	2.2	2.5	
90	107	104	105	102	108	71	3.5	3.4	3.3	3.4	4.2
56	76	55	46	55	58	39					
73	49	65	37	58	61	41	1.7	1.8	1.6	1.5	
78	107	82	87	71	76	55	2.4	2.0	1.8	1.6	2.0
78	53	55	42	75	61	31					
82	61	50	42	79	72	65	2.2	3.9	2.5	1.3	
69	72	38	33	71	101	71	3.0	4.6	2.8	2.0	3.6
69	53	38	51	64	101	29					
82	107	104	91	102	108	60	3.2	3.9	3.4	2.6	
99	107	70	96	102	108	65	3.5	4.4	4.0	4.0	4.9
94	68	46	42	64	64	58					
69	53	82	60	75	88	69	2.2	3.1	2.3	2.0	
82	107	70	87	84	68	71	2.9	4.6	3.0	2.6	4.2

Section I: Without PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
29	1	69	97	67	78	54	-.64	62	62	62	42
		78	100	78	78	54	-1.41	68	57	70	70
		90	89	82			2.85	66	55	80	73
30	2	79	98	78	69	54	-2.47	62	60	87	63
		88	77	70	93	76	-2.04	72	85	87	78
		100	80	82			-1.89	81	81	66	87
31	1	77	88	69	87	61	-2.10	64	57	75	66
		85	97	83	89	71	-.88	73	77	80	70
		95	93	90			-1.88	73	68	66	70
32	1	77	84	66	78	54	-2.97	58	55	70	59
		86	87	76	75	59	.11	85	106	75	66
		98	86	86			-.43	88	85	75	82
33	1	77	98	76	91	64	.85	72	106	75	66
		86	104	90	97	80	-.20	81	77	75	78
		98	94	94			-.38	88	106	75	99
34	1	76	94	72	89	63	-2.35	62	55	80	70
		84	98	83	79	63	.83	74	60	105	78
		96	96	94			.48	100	74	94	92
35	2	68	105	71	70	47	-1.32	57	49	62	53
		77	96	74	102	74	-1.23	69	60	75	78
		94	88	84			.11	94	95	105	82
36	1	73	90	66	80	55	1.61	60	51	57	53
		82	97	80	89	71	-1.10	71	65	87	70
		94	83	80			.00	93	81	75	87
37	1	74	75	57	74	50	-1.78	59	57	105	42
		83	81	69	73	57	-1.82	65	57	75	56
		95	88	86			-.38	88	106	80	78
38	1	74	75	57	47	38	-3.00	48	65	49	50
		83	88	74	79	63	-3.00	54	46	62	53
		94	75	73			-2.58	68	77	75	73
39	2	79	82	66	57	45	-3.00	55	38	57	73
		88	87	78	77	61	-2.42	69	71	70	82
		99	87	88			-2.25	78	74	62	87
40	2	87	69	62	65	50	-3.00	54	81	62	47
		95	76	74	69	59	-3.00	54	51	62	50
		105	82	88			-2.91	73	62	62	66
41	1	81	72	60	40	38	-3.00	52	60	57	47
		92	68	64	67	57	-3.00	60	53	62	66
		102	82	84			-3.00	69	57	62	70

11	12	13	14	15	16	17	18	19	20	21	22
78	42	82	78	61	68	56					
99	79	55	55	64	68	66	1.7	2.5	1.9	1.4	
65	107	46	42	67	72	70	3.5	4.9	3.1	2.7	4.4
35	68	65	55	64	58	72					
90	76	60	60	58	64	66	2.1	3.6	2.0	1.7	
94	107	70	87	58	94	66	2.4	3.2	3.2	1.5	2.5
44	64	82	60	67	64	89					
69	72	104	69	64	76	62	1.8	2.2	1.9	1.8	
73	107	65	60	71	81	67	3.2	2.9	3.4	2.1	2.2
65	49	50	51	55	68	62					
90	93	70	46	102	108	63	2.9	3.9	2.0	1.8	
107	107	65	73	84	108	61	3.5	3.9	3.3	3.0	3.6
86	46	88	69	67	64	71					
73	68	65	55	102	101	63	2.9	3.1	2.1	2.8	
107	83	55	100	71	108	62	3.0	3.2	2.7	2.9	3.0
78	53	55	51	64	58	82					
90	64	95	69	71	68	63	2.7	3.9	2.8	1.9	
94	107	104	87	102	108	71	3.0	4.9	3.8	2.0	3.6
61	42	50	60	71	61	93					
90	76	82	42	67	64	71	2.9	3.6	2.3	2.2	
107	83	108	87	102	72	59	3.9	4.6	3.3	2.6	4.4
73	57	55	64	64	72	71					
65	93	82	73	61	64	62	1.6	1.9	1.6	1.6	
99	107	65	91	102	108	64	2.2	2.4	1.9	2.5	2.1
52	61	46	60	67	58	91					
107	61	65	46	55	72	69	1.6	3.1	1.8	1.6	
107	107	55	87	102	76	71	3.7	4.9	3.3	2.9	4.2
35	46	46	28	58	31	52					
48	61	46	69	58	47	29	3.2	3.1	3.0	3.6	
32	72	65	87	61	47	62	2.7	3.2	2.0	1.3	2.9
44	68	46	37	84	52	42					
48	64	50	73	102	52	51	2.1	2.5	2.0	2.5	
61	88	50	96	102	58	75	2.3	2.9	1.9	2.0	2.9
69	46	33	51	58	36	58					
61	38	46	46	71	58	46	1.9	2.8	2.0	2.2	
94	83	65	73	94	68	79	2.9	3.6	2.3	1.6	4.2
73	49	38	28	52	50	59					
56	57	60	69	67	55	25	1.7	2.1	1.7	1.3	
52	107	70	73	79	64	61	2.5	2.5	2.2	1.2	2.7

Section I: Without PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
42	2	73	82	61	63	44	-3.00	51	60	57	47
		82	82	69	83	66	-3.00	58	65	75	56
		93	77	74			-2.26	70	55	66	78
43	1	69	94	65	100	71	-.25	69	65	57	70
		77	101	78	100	71	-1.35	68	68	66	70
		88	96	84			-.65	85	77	105	87
44	1	72	97	70	87	61	-1.33	62	65	57	66
		81	98	80	79	63	-.79	72	68	70	78
		92	116	108			-.11	91	62	94	87
45	2	75	84	64	44	41	-2.85	59	53	75	42
		90	73	68	57	47	-3.00	63	62	75	56
		102	78	82			-3.00	64	65	87	63
46	2	72	65	49	26	30	-3.00	48	65	44	50
		81	82	68	59	46	-3.00	48	46	36	53
		92	94	88			-3.00	60	65	53	70
47	1	71	75	55	63	44	-3.00	51	51	75	44
		80	83	68	67	52	-.85	72	35	75	70
		91	88	82			-2.31	70	57	80	70
48	2	74	76	58	89	63	-1.44	62	74	57	50
		82	84	70	38	37	-3.00	49	35	53	50
		93	82	78			-3.00	61	57	70	63
49	2	73	86	64	91	64	-.81	66	57	57	59
		83	103	86	93	76	-1.60	67	42	36	78
		94	94	90			-1.18	80	81	53	66
50	2	78	86	68	69	54	-2.47	62	85	80	63
		87	82	73	83	66	-1.48	67	77	80	70
		98	93	94			-.54	86	90	105	78
51	1	69	81	57	87	66	-2.15	51	49	49	39
		77	84	66	81	55	-3.00	52	57	44	39
		89	88	80			-3.00	62	60	70	63
52	1	71	103	73	102	74	-1.16	63	57	57	70
		80	124	98	116	102	.58	84	90	80	78
		91	113	104			-.70	85	81	80	82
53	1	69	89	62	91	64	-1.47	56	42	70	56
		78	97	76	97	80	.20	80	60	75	82
		90	97	89			-2.15	71	57	66	92
54	1	79	69	57	69	54	-2.47	62	74	66	59
		88	75	68	79	63	-2.10	72	65	66	59
		100	84	86			-3.00	66	51	87	73
55	2	80	75	62	75	57	-3.00	57	51	70	53
		87	82	72	95	78	-1.88	73	81	80	63
		101	83	86			3.00	65	62	87	73

11	12	13	14	15	16	17	18	19	20	21	22
82	53	46	51	55	68	57					
44	38	55	55	64	61	44	2.2	2.5	2.5	2.1	
82	107	42	87	67	72	62	2.8	3.2	2.2	1.8	3.6
48	57	104	64	102	68	82					
56	61	95	64	79	68	51	1.9	2.0	2.2	1.8	
56	107	104	73	102	81	77	1.6	1.7	1.3	1.5	1.1
52	57	50	55	84	64	37					
65	64	82	69	102	88	40	2.2	3.1	2.5	3.0	
78	107	105	60	102	108	56	2.8	3.6	3.0	2.7	2.6
73	79	55	42	55	64	92					
56	61	42	60	67	81	56	2.0	3.1	2.9	3.0	
78	76	30	28	88	68	70	2.1	2.3	1.7	1.6	2.6
61	27	33	37	52	47	57					
44	49	38	37	61	52	24	1.6	1.9	2.0	2.3	
52	57	55	64	64	52	72	1.1	1.6	1.9	1.8	2.0
35	53	65	28	52	50	93					
61	93	65	55	84	58	63	1.9	2.2	2.1	1.7	
78	64	76	78	102	52	74	2.5	1.8	2.0	1.6	2.1
94	49	42	55	88	44	69					
61	46	38	51	102	81	38	1.9	2.3	2.2	2.6	
69	57	30	51	94	68	58	2.7	2.8	2.2	1.8	2.7
78	49	50	69	94	76	73					
82	64	46	64	102	76	23	2.5	3.1	2.0	3.2	
94	72	60	69	102	108	66	2.8	3.9	3.2	2.8	3.6
61	49	42	42	88	40	88					
69	79	50	78	75	40	55	3.2	3.9	3.4	3.6	
94	107	50	109	84	68	75	3.3	4.3	3.3	2.1	4.2
48	46	60	28	84	55	9					
44	42	30	33	102	81	18	1.8	2.4	1.9	1.4	
94	53	30	37	75	94	70	1.6	1.7	1.8	1.7	2.0
44	79	95	69	67	52	62					
61	88	88	82	102	81	63	1.8	1.8	2.5	1.9	
82	79	50	109	102	79	70	1.6	2.1	2.2	1.6	1.8
61	49	70	64	67	36	56					
69	79	104	91	102	72	61	2.0	2.0	2.0	1.0	
82	64	60	78	84	72	66	1.9	2.2	1.9	1.4	2.1
69	61	46	51	58	61	61					
90	88	104	51	58	94	49	2.1	3.6	2.8	2.4	
78	79	30	73	75	68	70	3.5	4.6	3.4	2.4	4.7
61	34	60	60	67	61	68					
52	68	95	100	75	72	58	2.2	3.1	2.2	3.2	
48	57	42	69	71	81	82	2.7	3.0	2.3	2.0	3.8

Section I: Without PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
56	2	70	71	52	43	37	-3.00	48	47	40	37
		79	86	69	59	43	-.85	72	53	62	63
		90	78	72			-2.10	72	74	70	78
57	1	72	74	55	38	36	-3.00	49	53	44	47
		81	76	63	79	63	-1.29	69	49	57	66
		92	87	82			-3.00	64	90	70	63
58	1	69	81	57	108	80	-2.87	45	49	32	56
		77	93	72	108	80	.14	79	106	94	63
		89	93	84			-2.58	68	62	80	73
59	2	68	70	50	61	44	-3.00	41	44	49	34
		77	77	61	82	57	-2.60	61	44	53	50
		88	76	69			-3.00	64	74	70	66
60	1	79	71	58	52	44	-3.00	57	53	49	42
		87	78	70	77	61	-1.94	73	90	87	59
		99	89	90			-3.00	71	57	75	73
61	1	78	72	58	69	54	-2.66	60	55	70	50
		86	73	65	71	55	-.65	76	71	70	63
		97	76	76			-1.24	79	74	105	73
62	2	78	75	60	67	52	-2.85	59	55	75	47
		86	79	70	63	48	-.20	81	62	80	66
		98	76	77			-1.77	74	60	75	78

Section I: Without PLDK

Group II: Control

1	2	72	74	55	91	64	-2.29	56	81	80	44
		79	86	69	79	63	-1.35	68	62	70	59
		91	81	76			-1.83	74	57	62	78
2	1	76	81	63	76	52	-2.60	61	85	75	63
		84	94	80	83	66	-1.37	69	57	105	82
		96	87	84			-1.77	74	71	105	92
3	1	84	76	66	57	45	-2.18	62	62	62	50
		91	83	77	85	76	-1.67	75	55	70	82
		103	89	94			-2.13	79	57	105	92
4	1	73	105	76	87	61	.49	75	90	80	59
		81	106	86	102	87	2.01	98	60	94	87
		92	119	110			.32	97	106	87	87

11	12	13	14	15	16	17	18	19	20	21	22
48	42	35	37	102	40	24					
56	107	70	51	102	64	43	1.7	1.7	1.9	1.1	
61	79	42	46	102	64	61	1.4	2.1	1.8	1.6	1.1
69	53	42	37	61	31	34					
65	61	88	51	102	76	32	1.9	2.1	1.9	1.5	
48	57	55	33	79	72	66	1.9	2.4	2.0	2.3	2.0
48	31	60	33	37	55	22					
86	93	88	69	79	61	37	1.8	1.6	1.8	1.2	
82	72	42	60	75	68	60	1.6	1.6	1.9	1.7	1.0
52	42	30	37	50	31	54					
82	64	65	73	58	61	47	1.8	1.6	1.9	1.3	
73	72	38	37	75	58	63	1.6	1.9	1.9	1.6	1.4
61	107	50	46	61	52	37					
86	72	50	78	71	72	61	1.9	1.4	1.8	1.6	
86	88	42	73	79	76	55	2.0	1.7	1.9	2.0	1.1
65	61	82	51	50	72	38					
86	79	88	91	67	81	38	2.2	2.5	2.0	2.0	
94	61	82	82	71	94	67	2.2	2.2	1.9	2.0	2.4
52	57	35	73	102	50	79					
82	79	60	78	102	108	63	2.4	2.4	1.9	1.5	
94	49	42	87	102	101	63	2.3	3.4	2.3	2.5	2.4

52	46	42	55	45	55	67					
94	76	46	60	79	72	68	1.6	1.5	1.7	1.2	
94	88	46	87	94	72	65	2.2	4.6	1.9	2.5	3.2
65	53	46	28	43	88	32					
78	76	60	33	75	72	48	1.5	1.8	1.6	1.4	
86	61	38	82	79	76	59	1.9	1.7	1.8	2.5	2.1
82	68	50	46	67	64	61					
78	76	76	82	102	68	73	2.0	2.4	1.8	2.5	
90	83	38	87	102	72	62	3.0	4.6	3.3	3.2	3.6
90	72	46	78	102	40	73					
111	107	104	91	102	58	62	2.0	2.3	2.0	1.7	
90	107	35	87	102	81	63	2.7	3.6	2.7	2.4	4.0

Section I: Without PLDK

Group II: Control (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
5	1	73	83	62	34	34	-2.01	58	62	62	44
		81	81	67	63	48	-2.04	64	55	57	56
		92	76	72			-3.00	61	55	49	66
6	1	69	86	60	100	71	-1.55	61	57	62	63
		77	96	74	104	76	-2.47	69	62	87	70
		88	99	88			-1.18	80	62	80	73
7	1	90	71	66	51	44	-3.00	59	51	62	42
		97	61	62	85	76	-1.87	64	62	80	56
		109	68	76			-3.00	72	55	94	59
8	2	72	89	65	95	68	-1.50	61	53	75	56
		78	83	66	93	76	-1.46	68	57	75	70
		92	85	80			-2.10	72	55	57	78
9	2	77	84	66	91	64	-1.23	69	71	94	66
		85	90	78	77	61	-1.10	71	77	62	82
		97	78	78			-2.15	71	68	70	66
10	2	79	73	60	79	63	-3.00	52	46	66	59
		87	82	73	110	82	-1.64	66	62	49	70
		98	83	84			-1.13	80	65	94	87
11	2	74	82	62	67	46	-1.61	60	51	75	47
		81	84	69	71	55	-1.37	68	64	80	66
		93	78	75			-2.15	71	106	57	70
12	1	70	91	64	74	50	-2.63	54	53	75	39
		78	93	73	63	48	-1.79	66	60	75	66
		90	92	84			-1.56	76	68	94	73
13	2	71	75	55	55	41	-.76	66	106	53	56
		79	98	78	71	55	.95	86	106	80	78
		91	93	86			-1.99	72	65	75	66
14	1	78	61	50	36	36	-3.00	51	44	62	47
		86	76	87	77	61	-3.00	58	57	53	56
		97	86	86			-1.99	72	65	70	70
15	2	75	90	68	82	57	-1.55	61	57	87	59
		83	97	81	102	87	.56	91	106	80	82
		95	108	104			-.59	86	68	53	82
16	2	75	78	60	57	42	-2.01	58	65	44	63
		82	94	78	75	59	-.47	78	55	105	63
		94	84	81			-1.61	76	55	70	82
17	2	69	82	58	63	44	-.79	61	62	62	63
		77	87	68	67	46	-2.41	62	65	75	70
		88	88	79			-.97	82	106	75	78
18	2	69	99	68	89	63	-3.00	50	53	57	63
		77	81	64	97	70	-.98	71	95	70	73
		89	102	92			-1.13	80	106	87	78

11	12	13	14	15	16	17	18	19	20	21	22
73	72	46	33	71	50	68					
56	72	70	78	75	64	22	1.7	1.7	1.8	1.0	
82	68	30	55	84	61	55	2.2	2.8	1.9	2.0	2.5
40	72	65	42	84	58	24					
69	53	65	33	102	101	63	1.3	1.7	1.6	2.3	
86	107	82	51	102	64	62	2.0	1.7	2.0	2.6	2.0
61	57	55	51	79	76	50					
73	42	82	37	102	61	51	1.7	1.3	1.4	1.3	
73	88	82	64	102	61	54	2.0	2.2	1.7	1.6	2.2
86	49	50	55	67	61	52					
103	42	50	64	84	81	70	1.8	1.6	1.5	1.5	
103	72	55	87	75	76	71	2.6	3.0	2.6	2.0	4.2
65	88	76	37	75	61	70					
90	79	50	51	72	72	61	1.6	1.6	2.6	2.2	
90	83	70	69	64	68	68	2.5	3.0	2.7	2.3	2.6
82	27	30	42	55	72	13					
90	42	50	37	102	88	20	2.1	2.8	2.0	1.6	
94	72	33	73	102	81	62	3.2	4.6	3.4	2.5	4.9
78	57	33	64	84	64	27					
73	46	46	64	102	76	34	1.6	1.6	1.5	1.4	
65	57	42	60	102	61	70	2.2	4.3	2.4	2.2	4.7
35	46	46	60	50	88	83					
56	61	60	60	79	72	74	1.7	1.7	1.7	1.6	
94	64	33	82	102	76	64	2.6	3.4	3.0	2.3	4.7
56	64	35	60	102	50	49					
69	93	82	91	102	55	64	1.7	2.1	1.8	1.2	
86	72	30	69	102	68	67	2.9	4.6	3.0	2.3	4.4
61	61	35	37	58	52	80					
52	61	60	55	67	52	69	1.6	1.6	1.7	1.3	
90	107	55	55	79	76	77	2.4	2.8	2.3	1.8	4.4
69	27	46	55	102	52	33					
61	79	55	96	102	108	36	1.8	1.8	1.9	2.2	
99	107	38	96	102	94	74	2.6	3.6	3.3	3.2	3.6
52	61	42	51	55	72	59					
65	107	76	87	102	68	68	1.7	1.6	1.9	2.2	
86	68	46	82	102	76	67	2.1	3.6	2.1	2.4	4.2
44	93	38	46	67	64	60					
86	38	50	42	94	40	61	2.2	2.6	2.2	1.6	
99	93	50	87	84	72	65	2.9	4.6	3.7	3.0	4.9
65	61	30	51	35	50	54					
52	68	95	64	84	52	64	1.8	2.4	2.1	1.6	
86	79	38	91	84	72	51	3.1	3.9	3.2	2.8	4.2

Section I: Without PLDK

Group II: Control (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
19	1	69	87	61	72	48	-.81	66	55	62	66
		77	96	74	89	63	-.67	73	62	53	87
		88	99	88			-1.18	80	57	87	82
20	1	69	79	56	78	54	-2.19	50	55	57	44
		77	96	74	93	66	-3.00	53	53	49	53
		89	86	78			-3.00	62	55	57	82
21	2	69	87	61	82	57	-.64	62	60	57	63
		77	86	67	87	61	-1.73	65	65	66	66
		88	106	94			-1.56	76	60	53	78
22	2	69	95	66	87	61	-1.55	61	51	53	70
		77	88	69	85	59	.08	79	65	94	82
		89	100	90			-.75	84	95	87	78
23	1	75	61	46	40	36	-3.00	56	53	57	53
		83	83	70	63	50	-2.05	63	51	80	47
		94	83	80			-1.83	74	90	94	70
24	1	71	85	61	95	68	-1.84	59	62	87	53
		79	90	72	87	70	-1.91	65	46	87	63
		91	81	76			-2.15	71	62	80	99
25	2	70	83	59	70	47	-.70	66	51	53	63
		89	83	76	82	57	-.48	74	55	75	73
		89	100	90			-2.20	71	57	66	78
26	2	71	89	64	82	57	-.25	69	77	62	73
		79	101	80	73	57	.08	79	57	75	87
		90	101	92			-.48	87	90	70	99
27	1	74	90	67	80	55	-.81	66	42	80	59
		82	90	75	97	80	-.61	76	68	80	66
		94	98	94			-1.02	81	85	66	66
28	1	84	81	70	69	54	-.38	78	66	62	59
		92	80	76	74	64	-3.00	59	53	75	56
		104	88	94			-2.49	76	77	105	78
29	1	76	64	51	43	37	-3.00	58	81	70	39
		84	81	70	77	61	-2.41	60	77	66	56
		97	85	85			-1.56	76	65	70	70
30	1	74	100	74	63	44	-1.21	63	62	66	70
		82	95	79	69	54	-1.48	67	65	75	70
		100	104	106			-.70	85	65	80	78
31	2	80	95	77	89	71	-.36	75	71	80	82
		88	108	96	100	84	-1.34	78	65	87	92
		101	107	110			-1.05	90	77	80	87
32	1	70	83	59	61	44	-3.00	49	44	44	44
		78	91	72	95	78	-2.16	63	55	70	78
		91	84	90			-2.20	71	65	87	73

11	12	13	14	15	16	17	18	19	20	21	22
78	53	55	46	102	81	46					
48	107	104	78	75	68	62	1.9	1.5	1.7	1.5	
69	83	65	87	107	81	76	3.2	3.9	3.3	2.4	4.0
31	49	38	37	61	61	68					
40	38	65	37	67	61	62	1.7	1.8	1.6	1.3	
48	72	42	46	84	68	60	2.1	2.6	2.2	1.9	2.9
65	42	42	55	102	64	53					
94	46	42	46	94	68	59	1.9	2.6	1.7	1.4	
86	88	38	78	102	72	68	3.0	4.6	3.3	2.1	4.9
56	79	46	37	67	81	72					
61	93	88	78	88	81	52	1.9	2.2	1.6	1.7	
99	72	38	82	102	101	71	2.7	3.6	3.0	2.3	4.4
56	64	42	33	88	52	51					
61	64	88	64	94	58	71	1.5	1.5	1.7	1.4	
86	57	30	55	102	94	60	2.1	2.4	2.2	2.2	3.8
99	49	65	33	43	52	40					
103	68	76	55	50	64	58	1.6	1.5	1.7	1.2	
86	83	33	73	71	68	61	1.9	1.8	1.9	1.4	2.1
73	76	35	55	102	64	61					
94	64	65	60	102	108	67	1.7	1.6	1.8	1.4	
78	57	30	87	102	55	71	2.3	3.6	2.4	1.7	3.0
56	83	46	64	102	55	43					
61	76	82	60	102	108	64	1.7	1.8	1.7	1.4	
86	93	70	78	102	88	65	3.0	3.2	2.5	2.0	4.0
78	64	46	55	102	81	40					
103	83	82	55	84	76	58	1.8	1.8	1.7	1.5	
103	83	42	78	102	81	68	2.9	4.4	2.3	2.7	4.4
52	49	65	64	55	44	55					
73	46	76	60	43	64	59	1.5	1.4	1.6	1.2	
90	64	70	73	84	55	56	2.3	2.7	2.4	1.9	2.5
52	64	70	37	67	40	64					
65	46	70	51	61	50	57	1.7	1.9	1.9	1.4	
90	107	88	42	102	76	54	2.2	4.3	1.9	2.5	4.0
61	46	38	55	88	76	55					
73	46	42	69	84	94	53	2.5	2.3	2.5	2.3	
107	79	35	109	102	76	69	3.3	4.6	3.8	3.0	4.7
78	93	70	78	75	61	65					
90	83	70	91	71	68	58	1.7	1.7	1.6	1.3	
87	88	104	109	88	88	53	2.9	3.2	3.5	2.5	3.6
27	46	42	51	75	55	55					
73	46	76	51	64	64	53	1.7	1.8	1.9	1.1	
73	93	60	69	67	61	57	2.7	2.8	2.7	1.8	3.2

Section I: Without PLDK

Group II: Control (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
33	2	77	93	72	102	74	-.42	75	81	80	78
		84	99	84	116	102	-1.19	70	55	49	82
		97	107	106			-.86	83	65	57	87
34	1	76	91	70	100	71	-1.97	64	62	66	70
		82	89	74	97	80	-.65	76	95	75	66
		96	96	94			-.59	86	106	105	87
35	2	69	89	62	78	54	-.87	65	55	53	59
		76	94	72	99	61	-.23	76	68	94	78
		90	112	102			-.16	91	77	80	87
36	2	77	76	60	78	54	-3.00	55	51	87	44
		84	80	69	67	52	-2.18	62	53	75	63
		97	89	88			-2.42	69	60	62	78
37	1	75	82	63	83	66	-3.00	55	51	87	63
		83	98	82	91	74	-1.37	69	77	94	87
		95	97	94			-1.13	80	106	75	108
38	1	72	74	55	80	55	-3.00	51	51	66	50
		79	84	68	83	66	-2.47	62	81	66	56
		92	85	80			-2.58	68	71	70	53
39	2	80	74	61	73	57	-2.22	63	60	75	47
		84	84	75	77	61	-.74	75	77	80	73
		100	90	92			-2.01	80	106	66	82
40	1	71	72	53	80	55	-1.33	62	106	53	56
		79	83	67	85	68	-1.79	66	57	94	70
		92	85	80			-1.88	73	71	80	78
41	2	77	86	67	82	57	-2.04	64	65	66	70
		84	86	74	91	74	-.98	71	77	62	66
		97	93	92			-1.88	73	53	70	82

Section II: One Year PLDK

Group I: ITA

1	1	72	100	72	91	64	-.13	70	106	62	78
		80	116	92	102	87	1.39	91	81	80	87
		92	103	96			.38	98	106	94	92
2	1	81	72	60	67	52	-.98	71	106	75	66
		89	88	80	92	84	-1.34	78	68	105	78
		102	90	94			-1.59	84	90	105	87

11	12	13	14	15	16	17	18	19	20	21	22
78	72	55	55	102	72	46					
86	64	82	73	79	81	69	2.0	2.5	2.2	1.9	
82	107	88	105	102	76	67	3.7	4.6	3.5	3.3	4.0
90	61	46	33	102	52	57					
82	57	82	64	102	58	55	1.9	2.2	1.7	1.6	
94	76	35	87	102	76	63	2.8	2.7	2.4	2.9	3.4
78	76	60	60	88	64	62					
69	61	82	96	84	76	75	1.7	1.7	1.8	1.1	
107	107	65	87	102	76	75	4.2	4.9	4.2	3.3	4.7
61	61	38	37	71	47	42					
52	49	88	46	61	81	62	1.7	1.7	1.8	1.1	
94	61	70	78	71	61	70	2.8	3.2	3.2	2.7	3.6
56	57	46	55	39	55	79					
61	49	70	60	67	64	52	1.7	2.4	2.1	1.4	
90	107	55	73	55	61	62	2.5	4.3	3.2	2.7	4.0
56	46	35	42	61	47	72					
69	38	82	46	61	55	57	1.5	1.5	1.7	1.0	
90	68	76	73	67	55	62	2.0	1.9	1.9	1.9	3.2
82	76	42	46	64	76	64					
94	72	76	69	71	68	64	1.9	2.3	2.0	1.4	
65	107	88	73	79	68	71	2.9	4.3	3.4	2.4	4.7
48	83	46	46	61	58	59					
61	64	104	73	71	31	60	1.9	2.2	1.9	2.0	
61	79	55	96	94	58	58	2.8	2.4	2.2	1.1	2.3
65	57	42	60	79	68	74					
78	53	70	78	94	68	65	1.9	2.2	1.9	2.0	
94	61	60	96	102	64	60	2.9	4.3	3.3	3.2	4.2

78	53	38	69	88	68	69					
90	107	65	96	102	94	71	2.9	3.6	1.8	1.4	
103	107	50	91	102	94	73	3.9	4.6	3.3	3.9	4.4
78	76	55	46	88	50	67					
82	107	55	82	79	58	62	2.2	3.6	1.8	1.3	
65	83	76	87	102	68	73	1.4	2.2	1.8	2.7	1.8

Section II: One Year PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
3	1	70	113	78	93	66	-1.21	63	51	87	63
		77	130	98	108	94	1.26	90	95	94	82
		90	126	114			.27	97	85	80	87
4	2	84	86	74	55	44	-2.32	61	55	70	73
		92	80	76	67	57	-2.26	70	85	75	59
		104	86	92			-2.49	76	71	87	92
5	1	86	73	65	48	43	-2.32	61	46	105	53
		94	77	75	85	76	-3.00	62	55	53	59
		106	88	94			-1.95	81	77	75	70
6	1	75	72	56	47	38	-3.00	55	74	53	42
		83	88	74	99	82	-1.69	66	68	75	70
		95	91	88			-2.10	72	46	62	87
7	2	75	99	74	85	59	-1.41	68	62	87	78
		83	111	92	100	84	-1.28	69	55	57	78
		96	96	94			.05	93	74	87	92
8	2	84	72	63	28	33	-2.77	57	55	62	50
		91	77	72	69	59	-2.85	66	77	75	59
		104	78	84			-2.91	73	90	57	66
9	1	95	72	71	88	80	-3.00	62	53	53	63
		103	83	88	75	74	-2.01	80	85	94	73
		115	85	100			-1.59	84	106	66	78
10	2	69	89	62	72	48	-1.72	60	49	53	59
		77	107	82	78	54	-1.29	69	81	62	56
		89	102	92			.81	106	106	105	92
11	2	84	83	71	81	64	-2.77	57	51	57	82
		92	83	78	83	74	-2.26	70	55	94	82
		104	92	98			-2.79	74	65	62	99
12	1	81	77	64	57	45	-1.55	67	68	62	59
		90	97	89	92	84	-.75	84	65	105	108
		102	106	110			-.33	98	85	87	92
13	1	78	83	66	55	44	-2.16	63	60	80	59
		86	84	74	99	82	-.47	78	65	105	78
		88	94	84			-.16	91	77	75	108
14	1	74	55	44	38	36	-3.00	50	55	62	44
		82	77	65	81	64	-2.68	58	68	70	42
		95	67	66			-3.00	62	51	94	53
15	2	71	127	88	115	89	.55	70	53	57	82
		79	126	98	110	96	1.64	93	106	75	108
		91	138	126			1.99	112	106	105	104
16	2	78	73	59	79	63	-2.78	60	53	32	59
		87	86	76	77	61	-1.51	68	74	53	78
		99	83	84			-.75	93	90	80	73

11	12	13	14	15	16	17	18	19	20	21	22
52	68	88	60	67	52	67					
69	107	104	91	102	72	78	3.2	3.6	3.7	2.3	
82	107	95	82	88	108	69	3.7	4.3	3.2	3.2	4.4
56	64	50	42	61	68	37					
61	83	76	55	61	68	62	2.5	3.6	3.0	2.1	
65	107	50	78	75	64	76	3.3	3.9	3.1	3.0	4.2
56	79	65	46	55	61	47					
69	64	104	51	58	64	63	1.8	1.9	1.5	1.1	
103	107	104	64	58	68	61	2.3	2.1	1.9	2.0	1.8
61	49	50	60	52	52	64					
61	72	70	82	47	61	62	1.8	2.4	1.4	1.8	
86	83	60	96	71	76	64	1.9	1.9	1.7	3.0	1.9
78	53	65	55	79	64	60					
52	107	76	73	79	68	72	2.4	3.6	2.3	2.8	
99	107	76	96	88	72	75	2.2	3.0	2.6	3.4	2.6
86	79	70	42	50	31	59					
86	76	70	42	47	72	68	1.8	2.0	1.3	1.0	
107	107	46	60	55	72	62	1.9	1.5	1.7	1.4	1.3
52	46	70	64	84	72	55					
73	93	65	60	102	81	67	1.9	3.1	1.6	1.3	
86	107	42	73	102	94	46	2.2	2.2	2.0	2.4	2.2
82	49	55	60	71	61	83					
69	61	76	69	84	68	87	2.2	2.5	1.8	1.1	
103	107	65	91	102	88	91	1.5	2.6	2.1	2.4	2.5
69	57	38	73	41	55	50					
73	72	82	78	67	58	74	2.1	2.8	1.7	1.8	
69	107	55	100	61	61	63	2.1	1.7	1.9	3.0	2.5
78	61	88	55	88	58	38					
69	107	82	87	88	64	70	2.0	2.6	1.8	2.5	
94	107	65	73	102	81	60	1.9	2.4	1.9	2.9	2.1
52	53	65	69	79	58	53					
78	72	76	60	102	64	74	2.2	3.1	2.5	2.3	
78	107	60	91	102	94	78	3.5	4.6	3.2	2.7	3.6
40	46	50	46	75	31	33					
56	64	35	55	61	61	9	1.6	1.7	1.2	1.5	
65	79	55	37	67	68	60	2.7	2.6	2.2	2.1	2.5
61	107	70	105	79	52	72					
69	88	104	109	88	94	86	2.7	3.9	3.4	2.3	
94	107	76	114	102	108	80	4.6	4.6	4.0	3.4	4.4
48	76	60	60	102	55	33					
73	61	88	46	84	61	63	2.8	2.2	2.0	1.1	
86	107	55	91	102	81	70	2.3	3.0	2.0	1.8	2.3

Section II: One Year PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
17	2	78	91	72	69	54	-1.97	64	51	57	66
		86	97	84	93	76	-.79	74	62	94	87
		98	81	82			-.86	83	90	75	87
18	2	90	65	61	71	61	-2.69	67	55	70	66
		99	64	66	81	71	-1.51	77	60	75	78
		98	79	80			-.32	89	106	75	73
19	2	78	96	75	89	71	-.85	72	65	80	73
		86	84	74	99	82	-.79	74	42	87	87
		98	90	90			-.86	83	90	66	82
20	2	71	86	62	76	52	-.81	66	53	70	56
		79	90	72	79	63	-.04	78	62	80	78
		93	93	88			-1.67	75	57	105	82
21	1	77	88	69	70	47	-1.73	66	90	57	73
		84	99	84	95	78	-1.46	68	57	53	87
		96	104	102			-.32	89	95	105	82
22	2	75	74	57	43	37	-3.00	57	53	49	50
		84	86	74	83	66	-1.15	71	55	87	73
		96	86	85			-.81	84	74	80	92
23	1	77	77	61	82	57	-3.00	58	53	66	50
		86	82	72	99	82	-.97	72	95	62	78
		98	81	82			-1.61	76	74	62	87
24	2	79	64	53	61	47	-3.00	52	49	62	47
		87	76	68	69	54	-2.74	67	57	75	59
		100	68	70			-2.49	76	57	87	78
25	2	69	81	57	74	49	-.64	62	68	57	53
		77	98	76	87	61	-1.41	68	55	66	44
		89	90	82			-.86	83	53	62	87
26	2	72	85	62	74	50	-2.18	57	60	66	47
		80	94	76	81	63	-.29	73	71	80	66
		92	96	90			.54	86	90	66	78
27	2	68	87	60	47	38	-2.63	47	46	44	44
		76	91	70	80	55	-3.00	52	55	70	70
		88	83	75			-2.04	72	60	70	82
28	2	72	77	57	70	47	-2.18	57	46	44	53
		79	84	68	69	54	-.79	72	81	80	66
		92	85	80			-1.13	80	65	53	92
29	2	69	74	53	43	37	-3.00	47	44	49	39
		78	83	66	61	47	-3.00	58	57	66	70
		90	72	67			-1.83	74	60	70	73
30	1	73	90	66	85	59	-1.33	62	55	75	59
		82	97	80	100	84	-1.01	72	57	80	92
		94	94	90			-.11	91	95	80	92

11	12	13	14	15	16	17	18	19	20	21	22
52	49	70	82	94	72	75					
52	79	76	73	102	64	80	3.2	2.8	3.4	2.4	
78	83	70	73	88	108	81	3.5	3.4	3.3	3.4	4.2
65	49	82	60	94	81	80					
69	72	104	69	84	108	87	2.4	2.8	2.5	1.7	
78	107	88	100	88	73	81	2.8	2.8	3.2	2.2	3.2
90	49	65	82	84	68	35					
94	57	76	105	102	52	59	2.9	3.6	3.7	2.8	
99	76	60	87	84	108	54	3.3	3.9	3.4	2.5	3.6
99	83	55	60	64	61	40					
99	93	46	87	61	108	71	2.4	2.0	1.8	1.2	
61	107	55	51	88	81	60	3.5	3.8	2.2	2.5	3.0
78	53	65	60	61	58	69					
61	93	65	82	67	58	69	2.7	3.1	3.4	2.8	
94	107	65	87	71	64	82	3.7	4.9	3.5	2.5	4.6
90	53	46	37	75	58	35					
56	57	50	64	102	108	73	2.2	3.6	2.5	1.8	
82	93	55	91	88	108	61	3.0	4.9	3.8	2.0	3.6
61	49	60	60	71	55	66					
78	42	104	64	102	108	63	2.7	3.6	2.5	1.8	
73	93	70	69	94	68	73	2.5	3.0	2.7	2.9	2.7
56	68	55	60	55	31	81					
78	76	50	55	84	72	68	2.2	2.4	2.2	2.7	
78	107	46	78	102	68	72	2.9	3.2	2.6	2.1	2.5
56	76	70	42	61	72	83					
82	88	88	69	75	64	79	2.7	3.9	2.6	1.4	
82	107	104	91	88	81	73	3.0	4.6	2.8	2.0	4.2
65	53	42	55	58	58	55					
86	64	55	60	102	81	76	2.7	3.1	3.2	1.4	
107	79	65	100	102	88	81	3.9	4.4	4.4	2.7	4.7
52	64	46	42	43	36	44					
27	38	50	33	58	64	54	2.4	2.6	2.0	1.8	
56	79	46	91	102	76	59	3.9	4.6	3.3	2.7	4.7
73	46	50	82	64	55	76					
69	79	38	55	102	76	83	2.5	1.4	2.2	1.7	
111	72	70	82	102	81	79	2.9	3.4	3.8	2.2	3.8
78	34	42	51	47	47	20					
52	46	42	55	52	72	55	1.8	2.3	2.0	1.3	
99	83	76	78	58	88	63	2.3	2.5	1.8	1.8	2.2
56	79	60	51	67	58	91					
69	72	95	69	79	68	66	2.9	3.6	3.7	1.4	
94	107	88	87	88	94	67	3.3	3.2	3.3	2.2	3.2

Section II: One Year PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
31	1	78	86	68	45	42	-1.97	64	68	66	53
		87	86	76	95	78	-1.24	69	71	87	78
		98	94	94			-1.13	80	106	80	99
32	2	78	100	78	87	70	-1.97	64	53	49	59
		87	88	78	81	64	-.61	76	90	80	82
		99	83	84			-1.77	82	90	75	82
33	1	70	65	48	32	34	-2.68	46	65	57	47
		78	91	72	67	52	-1.79	66	55	70	63
		90	87	80			-2.20	71	95	62	82
34	2	80	79	64	73	57	-2.35	62	60	57	53
		87	81	72	91	74	-2.96	65	62	80	59
		99	76	78			-1.53	85	68	87	73
35	2	72	82	60	36	35	-2.63	54	49	80	53
		80	89	72	63	48	-1.29	69	57	53	66
		92	83	78			-.86	83	68	70	82
36	1	72	79	58	47	38	-1.67	60	51	70	50
		80	82	67	55	44	-2.16	63	57	66	56
		92	75	71			-1.72	75	85	80	63
37	2	70	71	52	80	55	-2.81	52	49	44	53
		78	105	82	50	41	-.92	71	46	70	66
		126	60	75			-2.97	72	68	66	82
38	2	72	80	59	78	54	-3.00	51	49	57	44
		80	97	78	102	87	-.54	74	106	57	70
		91	86	80			-2.04	72	106	75	70
39	1	70	89	63	85	58	-1.72	60	65	62	53
		78	105	82	77	61	-1.16	69	62	87	70
		90	101	92			-1.51	77	81	87	78
40	2	78	89	70	97	80	-2.35	62	55	53	56
		86	101	88	99	82	-1.15	71	60	75	78
		86	94	82			-.81	84	81	75	78

11	12	13	14	15	16	17	18	19	20	21	22
69	53	70	60	61	88	29					
56	79	50	60	75	68	67	1.9	3.6	2.8	2.0	
65	107	60	64	88	58	69	2.3	2.7	2.6	2.2	2.7
107	42	50	69	102	64	34					
69	53	70	82	88	81	61	3.2	2.5	2.0	1.9	
103	68	50	96	102	64	71	3.5	3.4	3.2	2.4	3.4
44	34	50	28	55	31	54					
90	64	60	42	84	68	45	1.6	1.7	1.8	1.2	
65	68	65	28	102	76	52	1.9	1.9	1.7	1.7	2.3
86	46	55	64	75	64	64					
61	72	65	60	67	64	62	1.7	1.9	1.7	1.0	
78	107	76	73	94	81	79	1.9	1.6	2.2	1.9	1.0
65	49	55	37	64	31	71					
69	72	95	60	75	81	63	1.6	2.0	2.2	1.0	
90	107	70	73	102	76	81	2.4	3.0	2.2	2.4	2.5
52	61	42	60	94	64	64					
44	83	55	51	94	64	34	1.5	1.5	1.8	1.6	
78	83	42	55	102	88	59	1.6	1.7	1.6	2.1	1.3
35	42	35	37	102	40	37					
78	93	55	46	102	64	55	1.8	2.0	1.6	1.8	
69	68	42	37	102	94	67	1.8	2.2	2.2	2.0	2.3
52	42	65	55	50	50	64					
61	88	104	55	71	68	59	1.6	2.0	1.6	1.3	
44	64	104	55	67	81	68	2.2	2.2	1.8	2.0	1.9
65	49	65	33	84	55	50					
82	79	70	51	71	64	52	1.6	1.7	1.7	1.8	
78	93	76	69	71	68	49	2.0	2.1	1.9	2.2	1.6
82	42	55	64	88	68	26					
82	88	70	60	67	68	55	1.6	2.0	2.0	2.1	
99	107	70	69	64	101	64	1.6	2.1	1.9	2.2	1.9

Section II: One Year PLDK

Group II: Regular C

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
1	2	74	84	63	70	47	-2.41	55	62	66	42
		82	97	80	57	45	-1.28	69	65	66	59
		94	92	88			-1.02	81	60	94	78
2	1	83	73	63	93	76	-1.19	70	60	105	66
		87	94	83	85	76	.05	93	90	94	78
		103	81	86			-.45	97	106	80	87
3	1	74	60	47	55	40	-3.00	44	49	36	37
		84	67	59	48	43	-2.41	60	49	44	50
		96	66	66			-3.00	58	42	44	53
4	2	73	83	62	43	37	-2.07	57	55	75	59
		81	77	64	71	55	-1.29	69	81	66	66
		93	82	78			-1.83	74	65	75	73
5	2	76	85	66	65	45	-2.78	60	55	75	47
		84	81	70	87	70	-.70	75	60	66	82
		96	87	86			-1.29	79	65	75	99
6	1	75	101	78	80	55	-1.54	67	60	75	66
		86	99	86	79	63	.16	85	65	105	92
		98	96	96			-.11	91	68	105	108
7	1	73	86	64	70	47	-.47	68	106	87	53
		81	90	74	77	61	-1.15	71	60	105	63
		102	76	80			-1.89	81	62	66	92
8	2	76	64	51	40	36	-3.00	44	42	32	39
		84	76	66	69	54	-2.64	58	53	49	56
		94	74	72			-3.00	62	65	70	66
9	2	82	78	66	89	71	-1.33	69	57	87	63
		88	89	80	60	50	-2.90	66	65	87	70
		102	70	74			-3.00	62	65	70	70
10	2	93	88	84	97	91	-2.63	67	77	57	73
		101	87	90	98	94	-2.55	76	60	80	82
		113	76	88			-1.65	84	77	57	78
11	1	88	87	78	99	82	-2.90	66	53	53	59
		97	99	98	79	70	-1.29	79	90	75	99
		108	70	78			-1.11	89	77	87	108
12	1	89	72	66	83	66	-3.00	65	53	105	59
		97	74	74	76	66	-1.15	71	62	75	63
		109	68	76			-2.91	73	62	105	82
13	1	87	70	63	48	43	-2.14	62	36	62	53
		95	86	84	47	44	-.27	90	57	70	78
		106	73	80			-2.49	76	55	80	87
14	1	92	71	68	95	78	-3.00	59	51	62	70
		100	66	68	78	68	-2.04	72	71	94	73
		112	64	76			-2.53	68	57	80	78

11	12	13	14	15	16	17	18	19	20	21	22
44	53	46	42	67	61	60					
86	79	60	64	79	72	61	1.0	1.3	1.8	1.5	
107	88	50	69	102	76	77	2.2	2.3	1.7	1.8	1.9
90	64	88	64	84	47	53					
90	107	104	87	88	81	67	1.6	1.5	1.5	1.0	
86	107	104	87	102	72	71	2.3	2.4	1.6	1.6	1.3
48	27	35	33	79	36	56					
52	76	55	46	102	68	62	1.1	1.3	1.1	1.0	
48	57	42	46	102	61	75	1.9	2.4	1.7	1.4	1.9
61	57	60	60	55	40	92					
52	107	88	55	61	58	65	1.4	1.1	1.5	1.0	
86	93	76	64	75	68	59	1.9	2.2	1.6	1.6	2.0
94	57	46	64	52	52	35					
103	107	55	64	71	76	59	1.7	1.9	1.8	1.5	
103	107	99	78	75	64	40	2.7	4.6	3.2	2.1	4.0
73	57	65	64	102	52	41					
73	79	88	91	88	108	63	1.9	1.9	1.6	1.5	
94	88	104	91	102	88	66	2.8	4.6	2.8	2.9	2.9
69	68	65	60	58	64	69					
82	107	88	55	52	72	69	1.4	1.3	1.3	1.0	
94	107	76	87	75	81	63	1.8	1.9	1.9	1.6	1.3
48	42	42	33	71	31	23					
61	76	38	42	79	61	61	1.6	1.4	1.2	1.0	
48	46	42	37	102	61	36	1.9	2.1	1.8	1.5	1.8
73	49	70	78	102	58	52					
73	53	42	60	58	94	76	1.4	1.1	1.6	1.2	
65	68	42	33	61	72	73	1.5	1.7	1.9	2.0	1.9
61	61	70	82	64	64	86					
73	93	104	87	61	61	59	1.8	1.6	1.5	1.4	
99	107	95	105	71	64	68	1.9	2.1	2.1	2.0	1.9
94	61	50	64	79	88	60					
94	88	65	51	102	81	76	1.9	1.6	1.9	2.5	
107	88	55	78	102	76	69	2.3	2.6	2.0	3.2	3.0
69	57	65	51	94	58	55					
78	76	50	51	102	72	63	1.6	1.5	1.3	1.0	
86	49	60	64	94	76	48	1.6	1.7	1.8	1.4	1.6
73	49	55	73	102	68	68					
94	107	104	87	102	76	61	1.7	2.1	1.6	2.3	
99	107	46	33	102	76	68	2.1	1.8	2.3	2.2	2.1
56	53	70	46	71	55	74					
90	68	82	60	71	58	70	1.4	1.3	1.2	1.0	
78	64	55	73	71	64	70	1.8	1.9	1.8	1.4	1.3

Section II: One Year PLDK

Group II: Regular C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
15	1	103	67	71	57	54	-3.00	61	60	75	56
		111	68	78	75	74	-2.55	76	65	105	73
		123	62	77			-2.67	75	90	87	73
16	2	87	90	80	81	64	-2.14	62	53	75	78
		95	93	90	64	54	-1.94	73	57	80	92
		118	65	78			-2.07	80	62	66	92
17	2	81	93	76	65	50	-1.41	68	62	62	82
		89	98	88	81	71	-1.18	80	81	62	87
		101	79	82			-1.71	83	71	70	87
18	1	81	86	71	79	63	-1.23	69	90	87	66
		89	78	71	79	70	-.86	83	106	80	99
		101	77	80			-1.41	86	65	87	87
19	2	87	76	68	79	63	-3.00	64	53	80	63
		95	76	74	86	78	-.05	92	57	70	92
		107	78	86			-1.05	90	68	87	82
20	2	81	90	74	97	80	-.88	73	55	66	63
		89	102	92	100	84	1.34	112	77	80	92
		100	94	96			-.93	91	74	80	87

Section II: One Year PLDK

Group III: Regular G

1	1	73	73	55	70	47	-1.67	60	57	94	47
		82	90	75	87	70	.07	82	55	105	78
		94	98	94			-1.34	78	57	75	78
2	1	69	108	74	102	74	.23	69	65	70	66
		77	121	92	108	80	.77	84	90	75	73
		90	101	92			.05	93	90	75	82
3	1	71	86	62	91	94	-.70	66	77	75	59
		80	105	84	104	89	1.26	88	90	94	92
		92	110	102			.86	107	68	105	108
4	1	71	99	70	97	70	-2.98	51	55	57	44
		79	109	86	96	80	-.92	71	74	62	70
		91	104	96			-1.02	81	95	75	70
5	2	70	84	60	76	52	-2.46	55	62	70	53
		78	90	71	81	64	-1.66	66	74	66	70
		90	85	78			-1.88	73	85	94	82

11	12	13	14	15	16	17	18	19	20	21	22
52	61	55	60	58	68	46					
90	107	82	60	55	76	69	1.5	1.7	1.6	1.8	
86	88	70	60	61	68	69	1.8	2.2	1.9	1.6	2.3
43	61	65	55	75	61	55					
73	107	76	28	67	76	85	1.9	2.3	2.2	2.6	
82	107	104	60	88	81	66	2.6	3.2	2.7	2.7	3.2
69	53	35	60	102	76	61					
78	93	60	91	102	68	69	2.2	2.6	2.5	2.2	
86	72	55	87	102	81	69	2.9	4.6	3.3	2.7	4.0
69	57	50	51	84	72	64					
82	83	82	55	79	81	70	1.8	2.4	1.5	3.0	
86	107	70	87	102	101	67	2.1	2.4	1.9	3.0	2.3
48	49	38	55	102	61	61					
90	93	104	91	102	108	62	2.5	2.2	2.2	2.1	
78	107	65	91	102	94	67	2.7	4.9	3.5	2.2	4.7
73	61	104	82	102	58	54					
103	107	104	105	102	108	81	2.1	2.4	2.6	2.5	
74	88	104	109	102	64	69	3.2	4.6	3.5	3.1	4.9

48	61	60	46	84	52	66					
86	64	104	69	102	68	52	1.7	1.2	1.7	2.2	
94	79	88	55	102	76	47	2.2	1.9	2.1	2.1	1.8
82	61	60	51	102	64	76					
90	72	104	69	102	64	61	1.8	1.7	1.6	1.8	
90	107	104	73	102	108	67	2.2	2.2	2.0	2.2	1.9
78	57	42	55	102	58	71					
90	107	82	73	102	68	64	2.1	2.1	2.1	1.9	
107	107	95	105	102	88	74	2.5	2.9	2.4	2.0	2.9
44	64	88	33	35	55	80					
56	107	76	82	64	68	65	1.8	2.0	1.8	1.8	
61	107	95	87	75	72	68	2.4	2.8	1.9	2.1	3.6
61	38	55	46	67	31	59					
56	76	70	46	79	58	64	1.5	1.4	1.9	1.4	
86	64	76	60	67	61	69	2.2	3.2	3.2	2.0	3.6

Section II: One Year PLDK

Group III: Regular G (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
6	1	74	88	66	91	64	-.36	69	65	87	73
		82	105	86	106	91	.29	87	81	87	87
		95	97	94			-.38	88	106	105	87
7	1	72	93	67	80	55	-1.84	59	65	80	63
		81	90	74	81	64	-.85	71	60	62	78
		94	92	88			-.97	82	81	80	78
8	1	76	83	64	89	63	-3.00	57	55	62	50
		85	88	76	108	94	-.74	75	65	87	82
		97	82	82			-.27	90	95	70	78
9	2	72	94	68	104	76	-.93	65	60	70	56
		81	109	88	81	64	-.56	77	71	94	82
		93	97	92			-.43	88	77	62	92
10	2	72	103	74	97	70	.95	79	74	80	73
		81	109	88	83	66	.33	81	71	75	92
		93	99	94			-.86	83	81	80	92
11	2	79	84	68	97	80	-.79	72	106	80	78
		87	88	78	75	59	-1.34	78	106	66	82
		100	94	96			-3.00	71	57	40	82
12	2	70	87	62	72	48	-2.01	58	85	49	50
		78	94	74	77	61	-1.04	70	71	66	78
		91	102	94			-.70	85	68	75	70
13	2	82	89	74	73	57	-.88	73	68	57	70
		90	87	80	90	82	-1.99	72	90	75	87
		103	81	86			-1.71	83	85	80	92
14	2	78	84	67	61	47	-3.00	58	55	49	59
		86	87	76	79	63	-.52	77	95	70	78
		99	87	88			-1.41	86	90	80	82
15	1	78	86	68	89	71	-2.04	64	74	66	73
		86	101	88	108	94	-.34	79	74	57	87
		99	97	98			-1.17	88	65	80	87
16	1	79	73	60	71	55	-2.10	64	81	80	66
		87	88	78	85	68	-.92	73	62	94	63
		99	78	80			-2.85	73	60	87	73
17	1	72	66	50	32	34	-3.00	45	29	44	29
		80	72	60	73	57	-2.35	62	62	80	59
		92	83	78			-1.94	73	90	80	73
18	1	78	77	63	100	78	-3.00	56	57	49	44
		86	82	72	100	84	.56	91	106	75	63
		98	79	80			-.43	78	57	80	82
19	1	69	81	57	78	54	-1.90	58	77	75	50
		77	90	70	78	54	-1.23	69	62	80	78
		89	88	80			-2.20	71	65	105	66

11	12	13	14	15	16	17	18	19	20	21	22
82	64	76	78	52	61	75					
94	107	76	96	67	72	65	1.5	1.4	1.5	1.6	
103	107	70	91	61	76	63	1.7	1.6	1.3	2.5	1.9
65	53	60	46	45	55	51					
78	72	95	64	88	64	58	1.6	1.5	1.6	1.0	
103	79	82	69	102	64	58	2.1	2.2	2.0	2.2	2.0
65	31	65	55	61	68	79					
82	83	82	78	61	72	63	1.3	1.3	1.5	1.4	
94	107	104	82	102	64	67	2.4	3.2	2.1	2.0	2.2
69	79	65	46	71	68	57					
86	83	65	60	84	76	40	1.9	2.0	1.9	1.9	
111	107	65	82	84	107	72	2.7	3.2	2.8	2.2	3.2
73	61	104	69	102	76	48					
99	68	46	73	102	64	44	1.5	1.5	1.7	1.5	
65	79	82	69	102	76	67	1.9	1.8	1.9	1.3	1.4
56	68	82	33	75	81	83					
90	107	104	28	84	72	61	1.6	1.5	1.8	1.5	
69	107	60	51	94	94	72	2.0	1.9	1.9	1.1	2.3
65	57	35	46	61	58	79					
65	49	42	87	102	68	55	1.6	1.7	1.7	1.4	
82	107	55	82	102	108	72	2.7	2.8	2.5	2.3	3.6
78	107	76	55	94	76	69					
86	79	50	55	79	55	52	2.0	1.9	2.9	1.6	
78	88	70	78	102	68	69	2.7	2.6	3.0	1.1	2.3
69	46	46	69	67	55	62					
56	64	55	69	102	88	36	1.7	1.6	1.9	1.5	
82	64	65	73	102	101	68	1.7	2.2	1.6	1.6	2.3
69	49	65	60	94	31	69					
86	79	50	69	102	64	38	1.5	1.5	1.7	1.2	
94	107	65	87	102	68	73	1.8	1.7	2.0	2.0	2.1
56	57	82	51	50	58	66	1.4	1.4	1.7	1.0	
90	83	104	55	64	72	61	1.4	1.4	1.7	1.0	
73	107	88	60	71	68	61	1.8	1.5	1.8	1.8	1.0
52	53	60	33	64	52	85					
69	61	65	46	61	58	66	1.3	1.7	1.5	1.0	
69	107	70	46	75	61	67	1.8	2.4	1.9	1.8	2.1
52	49	76	51	67	55	69	1.7	1.6	1.6	1.0	
69	88	88	82	102	108	64	1.7	1.6	1.6	1.0	
78	107	76	73	84	101	73	1.8	1.6	2.1	2.0	1.6
48	46	65	42	58	58	50					
73	64	82	69	64	64	61	1.1	1.2	1.5	1.0	
86	68	104	60	58	64	68	1.7	1.5	1.9	2.1	1.6

Section II: One Year PLDK

Group III: Regular C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
20	2	77	77	61	34	34	-3.00	54	55	44	66
		83	90	76	83	66	-1.01	72	106	70	70
		95	84	82			-1.24	79	62	87	82
21	2	70	94	66	70	47	-1.67	60	55	75	78
		78	105	82	99	82	-.85	72	74	57	78
		90	94	86			-.86	83	71	66	99
22	1	77	88	69	95	68	-.85	72	106	36	82
		85	95	82	124	112	.83	95	106	105	82
		96	102	102			.48	100	77	94	108

Section II: One Year PLDK

Group IV: Team C

1	1	71	75	55	63	44	-.93	65	81	75	53
		79	106	84	81	64	.58	83	106	80	78
		92	94	88			-1.24	80	85	70	92
2	1	72	77	57	59	43	-1.72	60	62	62	50
		80	97	78	95	78	-1.48	67	62	62	70
		92	89	84			-1.56	76	65	62	82
3	1	76	91	70	95	68	-1.54	67	81	87	66
		84	94	80	118	105	.02	84	106	75	66
		96	104	102			-1.24	79	74	87	92
4	1	83	83	70	87	70	-2.41	62	51	94	63
		90	92	84	83	74	-.97	82	106	105	70
		100	92	94			-1.89	81	53	105	82
5	2	84	79	68	108	94	-.16	81	60	105	87
		90	99	90	100	96	-1.02	81	71	94	78
		103	99	104			-1.59	84	90	80	92
6	1	80	82	67	52	44	-3.00	57	57	75	59
		88	82	74	65	50	-2.26	70	68	75	87
		100	80	82			-2.79	75	57	87	73
7	1	69	99	68	36	35	-1.16	63	51	53	50
		77	90	70	65	50	.52	82	65	75	82
		88	92	82			-1.51	77	74	66	87
8	1	84	86	74	89	71	-.97	72	74	94	63
		92	78	74	86	78	-1.94	73	65	87	78
		104	77	82			-1.53	85	71	80	78

11	12	13	14	15	16	17	18	19	20	21	22
48	57	60	46	58	47	67					
90	42	55	69	84	68	73	1.4	1.7	1.6	1.7	
94	72	70	105	79	76	60	2.2	1.7	1.7	2.2	1.1
48	42	46	55	102	40	49					
90	57	55	78	102	58	61	1.5	1.4	1.3	1.4	
78	93	50	96	102	76	46	1.7	1.5	1.8	2.3	1.1
52	72	65	64	102	64	37					
56	107	88	82	102	68	67	1.3	1.3	1.5	1.3	
82	107	104	73	102	94	69	1.7	1.7	1.8	2.7	2.0

61	72	42	46	102	50	83					
48	107	104	46	102	64	52	1.5	1.7	1.4	1.4	
103	88	46	51	102	76	55	1.6	1.6	1.9	1.7	1.4
56	64	82	69	50	76	82					
56	107	82	64	55	72	70	1.6	1.6	1.7	1.8	
78	107	104	82	58	88	68	1.9	1.7	1.9	1.6	1.8
61	53	55	55	75	72	57					
94	93	76	55	102	81	63	1.8	1.7	1.7	1.8	
107	76	46	60	102	6	65	2.2	1.7	1.6	2.2	1.9
73	61	60	42	75	58	58					
94	107	60	51	61	76	61	1.8	1.8	1.9	2.4	
90	107	82	64	75	94	70	2.2	1.9	2.1	2.5	2.4
73	83	65	109	102	68	64					
99	76	76	105	88	61	67	2.5	2.6	2.0	1.5	
82	93	82	109	67	72	74	2.8	2.9	2.8	2.2	3.0
56	46	60	42	67	44	44					
94	61	60	42	84	68	48	1.8	1.7	1.8	2.2	
78	76	55	64	102	88	65	2.7	3.0	3.0	2.7	2.9
48	46	46	64	102	76	67					
94	76	70	46	102	94	57	2.2	2.5	1.9	2.4	
73	57	50	55	102	88	64	1.9	2.2	1.9	2.3	1.6
86	53	70	73	102	64	86					
69	107	76	46	75	61	82	1.5	1.4	1.6	2.2	
94	107	95	51	94	108	81	2.2	2.4	1.9	2.8	1.1

Section II: One Year PLDK

Group IV: Team C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
9	1	79	123	96	106	91	-.17	77	65	70	73
		88	111	98	122	109	-.22	90	90	94	99
		99	109	110			1.24	112	95	80	108
10	2	70	103	72	91	64	-.19	70	62	75	78
		78	133	102	95	78	1.08	88	68	94	108
		90	117	106			-.11	91	106	87	82
11	2	70	84	68	87	70	-.64	67	53	66	82
		88	96	86	97	80	-1.72	75	85	75	82
		99	97	98			-.93	91	77	66	99
12	2	70	89	63	91	64	-.87	65	51	49	70
		79	98	78	108	80	-1.34	78	71	75	78
		102	61	65			-.99	90	68	75	82

Section II: One Year PLDK

Group V: Team G

1	2	70	67	49	18	28	-3.00	45	42	53	39
		78	77	62	52	44	-3.00	49	46	70	39
		91	68	64			-3.00	53	55	53	42
2	1	71	69	51	65	45	-2.86	52	81	57	44
		80	82	67	89	71	-1.41	68	81	57	73
		92	81	76			-1.24	79	60	75	99
3	1	68	75	53	30	33	-2.05	51	51	53	42
		77	93	72	77	61	-2.60	61	65	75	70
		89	79	72			-2.26	70	68	70	73
4	1	75	72	56	36	35	-3.00	45	35	32	37
		83	77	66	65	50	-2.85	59	60	62	66
		96	68	68			-3.00	58	53	80	66
5	2	69	84	59	70	47	-1.18	58	49	75	53
		77	104	80	77	61	-.79	72	46	87	73
		90	99	90			-.38	88	77	105	92
6	1	79	73	60	67	52	-2.85	59	53	94	53
		87	81	72	71	55	-1.33	69	65	105	47
		99	69	71			-2.74	67	62	75	66
7	1	73	90	66	87	61	-3.00	51	42	53	56
		82	92	76	85	68	.11	85	81	70	78
		95	73	72			-1.99	72	53	105	92

11	12	13	14	15	16	17	18	19	20	21	22
86	88	104	69	79	55	74					
99	88	95	55	102	88	57	2.0	3.6	2.0	2.6	
90	107	104	109	102	108	84	2.7	3.4	3.1	2.9	3.2
52	64	60	78	102	58	45					
86	107	60	78	102	68	66	3.2	2.8	2.2	2.8	
94	107	70	96	102	68	78	2.9	4.9	3.3	2.7	4.7
73	64	55	55	75	88	87					
61	107	76	73	52	68	67	2.5	2.1	2.0	1.3	
111	107	95	109	61	88	63	2.7	2.6	2.8	2.0	3.2
78	53	55	73	102	58	21					
82	107	65	69	102	64	52	2.2	1.9	2.2	2.5	
78	107	60	105	102	88	55	1.7	1.9	1.9	2.3	1.4

35	38	50	37	55	47	65					
35	53	38	46	52	55	38	1.5	1.4	1.5	1.3	
69	53	30	46	58	64	34	1.4	1.2	1.6	1.0	1.0
48	57	46	33	55	31	38					
69	68	76	55	58	76	58	1.4	1.2	1.6	1.0	
99	72	95	73	75	94	67	1.8	1.7	1.8	1.4	1.0
61	38	50	37	71	52	31					
69	46	55	51	50	64	51	1.5	1.3	1.5	1.0	
82	72	88	51	71	68	63	1.6	1.7	2.1	1.7	1.0
40	46	38	33	94	47	62					
65	30	33	42	102	58	34	1.4	1.5	1.5	1.2	
52	34	46	55	75	58	26	2.1	1.5	1.6	1.6	1.0
69	49	50	42	64	72	88					
103	107	76	60	61	64	70	1.7	1.4	1.5	2.5	
82	107	95	91	61	68	78	2.3	2.4	1.9	2.5	2.3
56	53	60	42	71	58	65					
78	64	76	51	84	58	66	1.2	1.2	1.2	1.0	
99	76	65	33	61	68	66	1.7	1.5	1.9	1.6	1.6
48	31	46	64	58	55	66					
82	107	55	82	102	108	57	1.4	1.2	1.3	1.1	
94	83	76	82	58	50	65	1.6	1.7	1.9	1.6	1.1

Section II: One Year PLDK

Group V: Team G (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
8	2	68	87	60	61	44	-2.01	58	38	70	50
		77	93	72	82	57	-.67	73	57	87	70
		89	83	76			-2.58	68	53	70	70
9	2	86	78	69	23	30	-3.00	54	46	40	66
		94	75	73	67	57	-1.67	75	57	70	56
		106	70	76			-3.00	71	60	75	66
10	1	75	104	78	85	59	-.30	69	62	80	70
		84	112	94	91	74	.88	96	74	94	92
		95	90	96			1.08	112	106	70	99
11	1	85	88	76	89	71	-1.46	68	57	70	78
		92	103	96	88	80	.38	98	106	75	108
		104	94	100			-1.35	86	60	75	87
12	2	80	95	77	100	84	-.48	74	68	80	73
		87	117	102	108	94	.54	101	90	105	92
		99	115	116			.22	107	106	94	87
13	2	70	94	66	61	44	-.64	67	57	87	70
		78	87	69	97	80	.20	80	90	75	78
		90	101	92			-1.29	79	65	75	70
14	2	74	76	58	43	37	-1.61	60	46	70	73
		82	102	84	77	61	-.29	72	55	70	73
		93	88	84			-2.10	72	60	66	73
15	1	70	86	61	80	55	-1.90	58	53	105	50
		78	100	78	91	64	-2.29	63	53	75	66
		89	86	78			-3.00	72	62	70	66
16	1	71	78	57	26	24	-3.00	49	42	62	44
		79	95	76	75	59	-2.91	60	51	53	59
		91	79	74			-1.72	75	74	70	78
17	2	73	88	65	87	61	.04	72	106	87	59
		81	98	80	87	70	.64	84	57	87	78
		98	88	88			-1.51	77	65	70	82

Section II: One Year PLDK

Group VI: Visiting C

1	2	79	76	62	42	40	-3.00	55	46	53	47
		87	73	66	89	71	-2.27	61	62	40	63
		99	66	68			-3.00	60	49	53	66

11	12	13	14	15	16	17	18	19	20	21	22
61	53	55	60	75	68	63					
86	88	50	28	102	76	53	1.2	1.3	1.3	1.2	
56	72	50	69	102	68	59	1.7	1.4	1.8	1.9	1.9
40	46	35	51	102	31	73					
65	76	95	78	102	58	69	1.0	1.2	1.1	1.0	
65	72	60	64	102	64	57	1.2	1.7	1.6	1.5	1.0
56	68	82	69	84	64	66					
90	107	82	69	102	108	79	1.9	2.4	2.1	2.4	
90	107	104	105	102	72	85	2.4	3.4	2.7	2.7	3.4
52	61	70	73	102	61	57					
78	107	60	82	102	108	68	1.9	2.3	1.9	3.6	
86	107	55	100	102	108	52	1.8	2.6	1.9	3.0	2.6
44	72	88	87	102	64	73					
82	107	104	69	102	108	72	3.2	3.9	3.0	3.9	
94	107	70	100	102	108	85	3.2	4.6	4.7	3.6	4.9
90	68	42	42	67	88	56					
90	61	76	87	84	88	68	2.1	2.8	2.1	3.0	
78	93	70	78	94	108	78	2.4	3.6	3.3	3.6	4.0
73	49	70	60	79	36	49					
73	88	104	82	79	55	75	1.6	1.5	1.7	1.3	
78	107	65	42	79	76	73	2.2	3.2	2.8	2.4	2.5
48	53	46	60	61	64	50					
44	79	60	64	67	58	67	1.6	1.6	1.4	1.7	
56	107	65	55	67	76	48	1.7	2.2	1.9	2.6	1.9
86	42	46	42	43	50	57					
73	46	76	42	67	72	68	1.4	1.4	1.6	1.2	
78	107	55	60	75	76	63	1.9	2.1	1.9	2.5	1.9
86	53	70	60	55	101	55					
103	107	88	100	71	64	63	2.4	2.4	1.8	3.2	
99	88	88	60	79	72	74	2.8	3.0	3.2	3.4	3.2

56	42	55	37	94	61	64					
69	64	46	51	71	72	51	1.5	1.3	1.7	1.0	
69	57	42	51	71	81	64	1.6	2.0	1.9	1.1	1.1

Section II: One Year PLDK

Group VI: Visiting C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
2	2	80	76	63	87	70	-1.60	67	65	53	92
		87	95	84	93	76	-.43	78	106	66	82
		99	85	86			-1.41	86	81	87	92
3	2	74	91	68	80	55	-.93	65	55	66	44
		82	105	86	83	66	-.92	73	62	94	87
		94	86	83			-1.61	76	74	62	73
4	2	75	78	60	83	57	-2.04	64	62	66	63
		82	92	76	91	74	-.88	73	68	57	87
		94	80	77			-1.08	81	57	75	82
5	1	80	91	74	93	76	-.92	71	81	75	78
		88	104	92	97	80	-.32	89	77	105	92
		101	89	94			-.02	103	85	87	108
6	1	80	102	82	91	74	-.60	73	51	80	73
		88	84	76	104	89	-.65	85	74	75	92
		90	110	100			-2.74	67	51	62	73
7	1	70	91	64	63	44	-2.58	54	51	66	44
		78	86	68	97	70	-.79	72	77	87	70
		90	82	76			-2.26	70	62	75	70
8	2	78	89	70	83	66	-2.66	60	55	75	63
		85	98	84	93	76	-.56	77	62	80	99
		98	83	84			-.81	84	71	62	92
9	2	76	88	68	110	82	-2.16	63	60	80	56
		84	92	78	102	87	-.43	78	68	80	82
		95	78	76			-1.67	75	65	94	73
10	2	74	82	62	72	48	-2.16	63	60	80	56
		82	89	74	69	54	-1.82	65	74	94	66
		91	77	72			-1.34	78	95	80	73
11	1	74	91	68	95	68	-2.29	56	65	70	63
		82	86	72	89	8;	-1.06	72	74	94	66
		93	77	74			-1.56	76	62	80	87
12	2	69	99	68	89	63	-.01	67	77	70	66
		77	110	84	104	76	-.17	77	85	75	87
		88	92	82			.65	103	77	75	92
13	2	72	72	54	70	47	-2.98	51	49	53	56
		80	89	72	85	68	-2.16	63	65	66	73
		93	65	63			-2.90	66	57	75	70

11	12	13	14	15	16	17	18	19	20	21	22
32	57	46	51	88	68	50					
86	68	76	69	102	61	58	3.2	2.3	2.3	1.1	
99	107	55	51	102	68	66	2.1	2.4	2.0	1.8	2.2
40	46	42	69	102	101	19					
90	27	33	64	102	76	45	3.2	3.1	3.9	1.8	
94	49	30	91	102	76	67	2.9	4.3	3.3	3.2	2.4
73	68	70	37	75	61	35					
78	107	88	46	58	72	54	1.2	1.3	1.3	1.2	
94	107	70	51	84	101	62	1.7	2.2	2.1	2.3	2.5
65	68	65	73	79	61	60					
56	88	104	87	79	108	67	2.7	2.6	2.8	1.4	
107	107	104	100	84	68	85	1.8	2.0	1.9	3.0	2.0
73	72	104	87	71	72	68					
69	107	95	78	79	108	69	2.7	3.6	2.9	1.6	
52	107	65	46	67	88	70	1.7	1.7	1.9	2.7	1.3
48	57	50	42	61	61	35					
73	107	70	42	64	68	40	3.2	1.4	3.0	1.2	
90	83	70	33	71	88	43	1.6	1.5	1.8	1.6	1.9
61	61	50	51	67	58	77					
78	107	65	60	79	64	63	3.2	1.9	3.0	1.3	
90	107	50	82	75	108	42	1.8	1.9	2.3	2.2	2.1
90	57	88	51	75	64	58					
99	107	95	51	64	68	58	2.9	2.2	2.9	1.2	
65	107	65	73	75	68	61	1.9	2.3	2.1	1.3	2.0
90	57	88	51	75	64	58					
99	83	82	46	58	61	63	2.9	2.2	2.9	1.2	
90	76	76	51	102	81	69	1.7	1.5	1.9	2.0	1.0
82	46	55	37	41	47	9					
99	83	82	46	58	61	63	2.4	1.3	2.2	1.7	
73	83	60	73	94	88	65	1.6	1.9	1.9	1.7	2.3
73	72	42	46	102	58	52					
82	107	55	46	75	72	58	3.2	2.5	3.9	1.6	
99	107	76	87	102	108	65	2.4	3.2	2.3	2.9	2.7
56	49	55	42	55	44	25					
48	107	70	51	52	50	77	1.2	1.2	1.5	1.0	
69	88	70	51	55	64	63	1.8	1.5	1.9	1.1	1.3

Section II: One Year PLDK

Group VII: Visiting G

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
1	2	76	88	68	78	54	-3.00	56	57	70	56
		84	86	74	89	71	-1.15	71	106	70	70
		107	80	88			-2.25	78	81	70	73
2	1	71	85	61	87	61	-2.29	56	62	53	39
		80	83	68	87	70	-2.16	63	55	75	70
		91	93	86			-.91	82	62	80	82
3	2	75	87	66	80	68	-2.41	62	51	57	73
		83	103	86	85	68	-.43	78	71	75	87
		95	108	104			-1.94	73	57	87	87
4	1	69	103	71	85	59	-1.13	58	46	62	70
		77	107	82	91	64	-.60	73	57	53	87
		88	104	92			-.81	84	81	66	87
5	1	73	99	72	106	78	.19	70	71	66	87
		81	138	110	112	98	.47	90	90	94	99
		92	103	96			-.48	87	71	105	92

Section II: One Year PLDK

Group VIII: Volunteer C

1	2	80	91	74	85	68	-1.66	66	62	66	82
		88	89	80	102	87	-1.94	73	57	80	82
		100	94	96			-.14	101	106	105	87
2	2	75	87	66	70	47	-3.00	48	42	44	63
		83	90	76	73	57	-1.42	68	46	36	70
		95	84	82			-1.88	73	53	66	70
3	1	79	89	71	106	91	.27	80	85	87	82
		87	95	84	112	98	1.37	106	77	80	108
		111	74	84			-.27	99	106	75	92
4	1	78	69	56	59	46	-2.41	55	68	75	47
		86	84	74	89	71	-2.50	59	57	53	66
		98	86	86			-1.51	77	55	105	66
5	1	78	70	57	63	48	-3.00	51	51	53	53
		87	79	71	69	54	-2.91	56	38	75	66
		99	78	80			-1.64	66	57	66	73
6	2	74	88	66	91	64	-.59	67	68	80	66
		82	94	78	77	61	.02	84	60	87	82
		95	91	88			-1.24	79	62	87	82

11	12	13	14	15	16	17	18	19	20	21	22
40	72	46	60	75	31	58					
78	57	76	51	84	58	84	1.8	1.5	1.8	1.7	
99	107	60	42	102	68	71	2.3	2.2	2.1	2.0	2.9
65	72	55	37	61	52	65					
73	57	82	33	67	64	52	1.1	1.4	1.6	2.3	
90	107	82	64	67	94	74	1.7	2.3	1.8	2.4	2.5
48	68	60	64	67	68	53					
69	76	88	91	84	76	52	1.9	2.2	1.7	2.0	
65	68	70	87	84	72	64	2.3	3.0	2.4	2.8	3.6
69	57	55	37	75	55	54					
86	72	104	46	102	81	70	1.6	1.2	1.6	2.1	
90	83	88	37	102	108	67	1.9	2.5	1.7	2.5	2.2
69	72	60	51	88	68	67					
90	107	70	82	102	61	89	1.8	1.5	1.6	2.2	
48	107	88	96	84	72	64	2.2	3.4	2.2	2.4	3.2

90	53	55	64	71	58	70					
99	61	55	64	102	76	57	1.8	1.8	2.2	2.2	
107	107	76	64	102	108	76	2.4	3.6	2.0	2.8	2.1
31	42	46	55	50	52	71					
78	88	60	64	102	76	61	1.6	1.6	1.7	1.2	
73	83	70	78	102	64	59	1.8	2.2	2.6	2.6	1.8
107	64	82	55	102	61	62					
99	107	104	96	102	76	63	2.1	1.8	1.8	1.8	
94	107	104	78	102	68	58	2.7	2.9	2.2	1.9	2.6
61	42	50	51	50	50	62					
44	72	65	51	55	64	66	1.8	1.9	1.9	1.8	
107	107	104	78	58	58	67	4.9	4.6	3.8	2.0	4.9
65	49	46	33	58	40	23					
31	46	42	51	102	58	64	1.3	1.5	1.4	1.1	
61	64	60	60	102	52	70	1.2	1.7	1.3	1.1	1.1
69	57	60	64	79	64	63					
73	107	70	37	102	108	61	1.6	1.5	2.1	2.0	
82	83	60	64	102	88	58	2.6	3.0	2.3	2.4	2.4

Section II: One Year PLDK

Group VIII: Volunteer C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
7	2	74	90	67	76	52	-1.16	63	57	53	87
		83	98	82	77	60	.74	93	71	75	92
		95	101	98			-1.13	80	46	70	92
8	2	78	69	56	57	45	-3.00	49	51	49	47
		86	76	67	65	50	-.02	83	51	87	63
		99	83	84			-2.20	72	77	57	70
9	1	70	83	59	87	61	-1.38	62	55	70	56
		78	94	74	81	64	-.48	74	65	80	78

Section II: One Year PLDK

Group IX: Volunteer G

1	1	76	91	70	89	63	-1.16	69	60	94	70
		84	99	84	108	94	-1.10	71	81	94	82
		97	91	90			-.38	88	106	94	99
2	1	73	74	56	76	52	-2.12	57	60	66	56
		81	93	76	91	74	-1.28	69	57	80	82
		94	92	88			-1.34	78	95	80	82
3	2	79	89	71	91	74	-1.29	69	81	57	73
		88	96	86	97	80	-1.94	73	65	53	78
		100	102	100			-1.53	85	68	80	92
4	1	72	85	62	43	37	-2.05	57	49	57	47
		81	90	75	79	63	-1.35	68	68	75	78
		93	95	90			-1.94	73	81	75	70
5	2	78	82	65	40	38	-2.47	62	46	87	50
		86	97	84	81	64	-.79	74	55	57	73
		98	100	100			-.11	91	71	62	82
6	2	80	79	65	89	71	-1.60	67	62	62	73
		88	108	96	106	91	-.65	85	85	94	87
		101	101	104			-.99	90	77	75	87
7	2	72	91	66	108	80	-1.55	61	46	53	66
		80	97	78	87	70	1.51	92	81	87	82
		93	113	106			.05	93	85	80	87

11	12	13	14	15	16	17	18	19	20	21	22
73	68	46	40	84	58	28					
103	107	88	91	102	76	60	1.8	1.5	2.0	1.8	
90	88	76	73	102	88	65	3.1	3.2	3.7	2.0	4.4
48	49	60	37	61	36	86					
94	88	104	82	102	64	54	1.6	1.4	1.8	1.1	
65	79	88	69	102	55	61	1.7	2.8	2.0	2.2	2.0
52	57	95	69	52	68	49					
69	72	95	51	71	108	57	1.8	1.8	1.8	1.1	
82	93	104	82	58	68	51	1.9	2.0	2.1	2.1	2.0

82	53	65	73	71	76	85					
61	64	70	69	67	64	64	1.4	1.2	1.4	1.0	
61	107	104	87	75	88	69	1.8	1.7	1.6	2.0	1.8
73	38	42	37	84	50	76					
82	61	76	51	79	72	51	1.4	1.4	1.6	1.0	
86	93	50	55	84	81	50	2.2	2.0	1.8	2.0	1.0
73	64	50	82	71	64	65					
86	79	88	100	71	55	65	1.6	1.5	1.9	1.3	
56	107	82	105	102	76	65	1.8	2.3	1.9	2.2	1.8
61	72	60	46	64	61	57					
56	88	76	33	55	94	61	1.3	1.3	1.1	1.0	
78	57	82	69	84	72	66	1.1	1.7	1.8	2.0	1.1
44	49	46	64	102	61	93					
86	107	60	55	102	81	84	3.2	2.3	3.2	2.1	
94	107	95	96	102	72	91	3.7	4.6	4.2	3.3	4.9
56	76	82	69	75	55	69					
90	79	104	78	84	72	70	1.8	1.8	1.5	1.9	
86	107	95	100	102	72	64	3.0	3.4	3.2	3.2	4.0
65	53	76	64	71	61	92					
78	83	104	87	102	108	84	1.9	2.6	1.9	1.2	
82	107	95	105	94	76	84	3.3	4.9	3.8	3.1	4.4

Section III: Two Year PLDK

Group I: ITA

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
1	1	74	91	68	93	66	-1.10	64	57	80	59
		83	106	88	83	66	-1.85	72	53	105	87
		94	98	94			-.70	85	62	105	92
2	1	69	100	69	95	68	-.13	70	57	66	66
		77	88	69	102	74	.52	82	55	105	87
		89	102	92			-.27	90	57	105	108
3	2	73	73	55	65	45	-1.61	60	85	57	50
		82	81	68	65	50	-2.14	62	77	66	56
		93	79	76			-1.94	73	53	75	70
4	2	77	91	71	87	61	-1.16	69	53	75	73
		86	97	84	81	64	-1.10	70	60	80	70
		98	96	96			-.48	87	74	70	73
5	2	74	97	72	106	78	-.53	67	53	87	59
		82	92	76	95	78	-.83	74	55	75	82
		94	98	94			.22	96	106	80	87
6	2	69	118	80	97	70	1.12	81	68	75	92
		78	108	84	123	96	.20	79	90	75	78
		90	129	116			.16	95	74	70	99
7	2	69	108	74	89	63	.33	70	53	62	66
		78	111	86	95	68	-.23	75	57	66	78
		90	99	90			-.11	91	74	87	87
8	1	78	96	75	106	91	.27	80	74	80	108
		87	100	88	114	100	.43	89	106	105	108
		99	111	112			.26	112	95	87	108
9	2	77	96	74	110	82	-.29	76	85	66	70
		87	90	80	102	87	-.43	77	85	75	78
		98	92	92			-1.53	85	85	105	68
10	2	73	96	70	97	70	.27	73	62	94	78
		82	113	92	99	82	-.52	76	74	75	73
		94	103	94			.92	97	71	105	82
11	1	69	99	68	78	54	-1.90	58	53	80	56
		78	111	86	77	61	.27	80	68	87	87
		95	91	88			-.48	87	106	70	82
12	1	74	91	68	100	71	-1.10	64	49	80	59
		83	95	80	104	89	-1.04	70	77	75	59
		95	110	106			-.70	85	68	62	99
13	1	75	93	70	95	68	-1.85	65	62	62	66
		83	108	90	85	68	-.07	82	81	94	82
		95	95	92			.38	98	81	94	87
14	1	77	88	69	106	78	-2.53	61	65	57	63
		86	88	77	93	76	-.11	81	77	80	92
		98	94	92			-1.24	79	60	49	92

11	12	13	14	15	16	17	18	19	20	21	22
56	64	65	73	58	68	63					
73	79	88	51	67	76	80	3.2	3.9	2.6	2.2	
86	107	82	87	79	88	81	3.0	3.6	3.3	2.2	4.0
65	72	65	96	88	72	88					
56	107	104	78	88	76	75	2.9	3.9	2.9	2.5	
94	107	88	96	88	72	92	3.3	4.3	3.3	3.0	4.4
65	61	55	28	64	64	31					
44	76	55	42	67	64	65	2.7	3.9	3.2	1.8	
90	93	55	55	102	88	56	2.9	3.6	3.2	2.3	4.7
65	72	50	42	102	64	51					
61	68	82	60	102	55	71	2.9	3.9	3.2	1.9	
103	107	76	78	102	68	71	3.7	4.3	3.0	3.0	4.4
90	53	46	55	102	68	33					
86	57	104	82	79	68	71	3.2	3.6	3.7	2.5	
86	93	82	100	102	108	78	3.3	4.6	4.4	2.8	4.0
78	93	76	78	102	58	62					
78	72	76	78	102	58	82	2.7	2.4	2.6	2.0	
94	107	95	100	102	72	88	3.5	3.4	3.3	2.8	2.9
56	79	70	51	102	81	57					
90	83	76	82	102	64	81	2.9	2.8	3.0	1.6	
86	107	55	78	102	88	75	3.3	3.9	3.2	2.6	3.4
82	88	104	73	71	58	80					
99	107	76	82	75	72	79	3.2	3.9	3.7	1.8	
99	107	104	82	102	108	90	4.2	4.9	4.0	3.6	4.2
65	107	70	96	75	61	67					
86	93	82	78	64	64	81	2.2	2.6	2.3	1.5	
94	107	70	91	64	68	92	3.3	2.7	2.2	2.0	2.2
52	76	104	64	84	58	47					
99	76	88	69	75	68	69	3.2	3.9	3.0	2.0	
103	107	95	100	102	76	92	3.7	4.3	3.8	2.5	4.0
56	57	65	55	55	55	64					
86	107	76	87	61	72	69	2.5	3.9	2.9	1.6	
82	83	70	91	84	108	77	3.7	4.3	3.0	2.3	4.0
82	49	60	73	75	61	64					
52	107	50	78	75	58	70	2.9	3.9	2.5	1.4	
99	72	60	96	102	108	65	3.0	4.3	4.2	2.9	4.2
90	61	50	73	64	61	46					
90	107	82	100	67	61	71	2.9	3.6	3.0	2.0	
90	107	95	114	84	81	26	4.6	4.9	3.5	2.9	4.9
56	61	104	37	55	55	60					
78	107	104	82	71	64	71	3.2	3.9	3.0	1.7	
94	107	104	91	64	68	92	3.3	4.9	3.3	2.9	4.9

Section III: Two Year PLDK

Group I: ITA (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	1
15	2	73	105	76	106	78	1.18	81	77	75	8
		82	118	96	106	91	.11	84	68	49	8
		95	112	108			.86	107	90	70	10
16	2	74	97	72	108	80	-.02	71	65	57	8
		83	95	80	100	84	.16	85	60	80	9
		95	112	108			.97	112	95	66	10
17	2	68	97	66	97	70	-.35	64	57	80	5
		77	98	76	108	80	.14	78	81	94	8
		89	100	90			-.86	83	81	40	73
18	2	69	118	80	117	89	.38	70	71	70	59
		79	127	99	97	80	1.51	91	77	70	99
		90	119	108			.54	101	106	87	82
19	1	78	103	80	100	84	-.67	73	106	57	82
		86	116	100	102	87	.88	96	95	94	87
		98	106	106			.86	107	60	105	99
20	1	80	94	76	75	59	-1.16	69	106	80	66
		87	105	92	95	78	.16	85	57	94	99
		99	103	104			.10	105	106	94	99
21	1	76	85	66	61	44	-2.60	61	60	87	50
		83	98	82	77	61	-.20	81	55	75	73
		95	84	82			-.43	88	106	87	82
22	1	69	102	70	87	61	-.64	62	57	57	66
		76	109	82	97	70	-.16	91	106	62	8
		89	95	86			-.63	94	106	105	108
23	2	76	85	66	85	59	-2.16	63	60	53	66
		83	114	94	99	82	-.02	83	85	57	3
		95	101	98			-.81	84	77	80	82
24	2	73	83	62	59	43	-2.41	55	55	62	6
		81	96	78	73	57	-.23	76	55	87	8
		93	102	96			-.45	97	71	70	2
25	1	79	79	64	69	54	-3.00	57	57	62	3
		87	103	90	71	55	-3.00	62	95	75	9
		99	85	86			-3.00	72	57	66	3
26	1	75	87	66	93	66	-2.01	58	68	70	9
		83	101	84	124	112	-1.10	71	77	57	2
		95	93	90			-1.02	81	85	70	2
27	2	72	88	64	76	52	-1.84	59	46	75	3
		80	105	84	79	63	-.98	71	44	87	3
		93	110	104			-.48	87	95	70	2

56	79	65	105	102	61	34					
69	107	82	100	102	76	69	3.2	3.9	3.9	2.6	
90	107	76	114	102	108	76	4.2	4.9	4.7	3.0	4.4
56	79	50	91	61	108	43					
78	107	55	87	75	108	71	3.2	3.6	3.4	2.6	
103	107	70	105	102	108	92	4.9	4.9	4.0	3.2	4.2
73	49	46	73	102	47	39					
61	88	46	87	102	61	61	2.9	3.9	2.8	1.2	
86	107	55	96	102	72	57	3.2	4.6	3.3	2.3	3.6
56	76	65	60	102	64	47					
86	107	55	87	102	76	80	3.2	3.6	2.9	2.0	
86	107	76	100	102	88	90	4.9	4.6	4.7	3.4	4.4
61	57	65	73	102	55	70					
73	107	104	91	102	76	68	2.7	3.9	3.9	2.8	
86	107	104	87	102	108	92	3.3	4.9	4.9	4.3	4.9
73	61	55	60	79	55	85					
44	88	104	78	102	108	65	2.7	2.8	2.7	1.8	
86	107	104	91	88	81	93	3.5	3.9	4.0	2.4	3.2
35	61	65	46	76	68	81					
99	107	104	51	94	76	74	1.7	2.8	1.7	1.7	
82	107	70	64	102	81	86	2.7	4.3	3.1	2.7	3.3
82	49	60	51	67	68	57					
82	88	95	64	102	88	61	2.1	3.9	2.3	2.6	
90	83	104	87	102	76	68	3.2	3.2	3.0	3.2	2.9
86	61	65	55	58	68	52					
90	107	104	73	67	81	70	2.9	3.9	3.2	2.6	
86	107	70	82	75	88	66	3.3	4.6	4.0	2.9	4.7
90	68	46	33	52	31	67					
69	88	82	60	102	81	65	2.7	3.1	2.5	2.1	
90	107	76	96	102	101	86	3.3	4.9	3.5	2.8	4.2
48	46	70	51	52	61	47					
56	53	55	28	75	58	61	1.7	2.8	1.8	1.6	
99	107	82	28	84	64	68	2.0	2.6	2.2	2.5	3.0
52	49	46	55	45	68	48					
86	57	82	96	58	61	66	2.5	3.1	1.9	2.2	
86	107	88	91	50	94	65	2.9	3.6	3.0	2.7	3.8
48	93	38	42	71	64	39					
82	79	65	60	102	61	67	2.2	3.6	1.9	1.8	
73	107	65	78	88	81	62	3.3	4.9	3.7	2.8	3.8

Section III: Two Year PLDK

Group II: Regular C

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
1	1	73	111	80	119	91	.95	79	90	87	78
		81	111	90	110	96	-.16	81	106	94	78
		93	102	96			.05	93	95	105	82
2	1	85	90	78	85	68	-.88	73	71	105	87
		92	94	88	86	78	-.43	88	90	105	108
		103	97	102			.04	104	106	105	108
3	1	73	111	80	104	76	.95	79	77	94	92
		80	127	100	106	91	2.45	105	106	94	99
		92	125	116			1.24	112	95	105	108
4	1	72	153	106	123	96	.95	86	85	94	92
		80	162	126	122	109	2.88	112	106	105	108
		92	134	124			1.40	112	106	94	108
5	2	69	103	71	78	54	-.87	65	65	87	63
		77	115	88	95	68	.70	84	95	87	92
		90	110	100			1.34	112	106	94	87
6	2	77	93	72	80	55	-2.10	64	46	105	70
		86	92	80	95	68	-.61	76	106	105	70
		98	98	98			-.43	88	65	94	108
7	1	79	109	86	106	91	.33	81	85	80	87
		84	112	94	112	98	-.16	81	95	94	87
		99	111	112			-.08	102	106	87	99
8	2	70	113	78	95	68	-.36	69	57	53	63
		78	119	92	95	78	-.29	76	68	57	82
		91	118	108			-.43	88	85	70	99
9	1	79	95	76	87	70	-1.41	68	53	70	87
		87	98	86	87	70	-.70	85	106	75	92
		100	96	98			-.27	99	90	75	87
10	2	73	94	69	70	47	-.02	71	65	75	70
		80	116	92	99	82	.14	79	95	75	87
		92	123	114			-.22	90	95	66	87
11	2	71	99	70	72	48	-.30	69	65	94	66
		79	109	86	77	61	.83	85	65	80	82
		93	119	110			-.27	90	106	87	82
12	1	71	88	63	100	71	-.70	66	49	62	63
		78	100	78	110	82	.02	78	68	57	92
		92	114	106			.91	109	90	80	82
13	2	77	94	73	104	76	-.54	74	60	87	87
		85	105	90	100	84	.38	88	74	105	92
		98	106	106			.16	106	106	87	108
14	2	68	97	66	93	66	-.84	61	64	66	73
		77	121	92	104	76	2.07	97	71	105	99
		89	100	90			.00	93	71	94	108

11	12	13	14	15	16	17	18	19	20	21	22
82	107	88	91	75	47	84					
56	68	104	78	102	72	61	1.7	1.5	1.5	1.3	
86	107	95	100	79	68	75	1.5	2.0	1.9	2.2	1.9
56	64	55	64	102	72	60					
86	93	82	73	84	88	64	1.6	1.8	1.5	1.7	
82	107	104	91	102	81	70	2.0	2.7	2.2	3.0	2.4
69	83	95	91	71	61	53					
90	107	95	82	102	76	64	1.7	1.7	1.7	1.5	
99	107	104	96	102	81	59	3.1	3.0	3.4	3.2	3.8
82	107	82	96	71	72	65					
86	107	104	82	102	94	65	1.4	1.6	1.7	2.1	
107	107	104	100	102	81	80	2.2	2.2	3.0	3.2	2.4
56	42	46	60	102	64	74					
94	83	95	64	102	61	65	1.7	1.9	1.7	1.8	
103	107	82	100	102	108	73	3.7	3.0	3.7	3.0	4.7
73	53	50	64	61	76	40					
90	42	70	82	71	76	48	1.9	1.5	2.0	2.5	
94	107	82	87	71	108	63	2.8	3.4	3.4	3.6	2.9
65	107	104	64	102	52	63					
52	107	95	96	102	50	62	1.7	1.4	1.5	1.8	
90	107	95	100	84	72	63	3.1	2.4	3.5	2.8	2.6
65	107	95	64	75	61	56					
82	107	55	73	71	72	68	1.7	1.7	1.6	1.0	
78	107	65	82	102	68	74	2.3	2.4	2.5	2.2	2.9
56	61	55	73	84	88	40					
82	107	82	69	67	94	63	1.9	2.1	1.7	1.8	
87	107	104	87	102	108	69	3.2	3.6	3.8	3.2	4.4
69	61	70	82	102	58	67					
78	88	60	64	102	72	75	1.9	2.3	1.8	1.8	
103	93	76	96	102	68	61	2.5	2.6	3.3	3.6	3.0
94	72	35	42	102	68	54					
94	107	65	82	79	94	73	1.7	2.2	1.7	2.2	
107	107	60	64	84	88	74	2.8	3.2	3.3	2.9	3.8
90	79	65	69	94	50	74					
86	107	76	73	75	61	73	1.7	1.6	1.7	1.6	
111	107	104	91	102	94	82	2.7	2.1	2.2	3.0	2.5
65	83	82	69	94	61	72					
69	107	104	69	84	81	77	1.7	1.9	1.7	1.8	
73	107	104	73	102	101	82	3.3	2.9	3.4	3.0	3.8
52	64	46	82	61	36	29					
90	93	104	78	102	108	81	1.7	1.9	2.0	1.4	
86	107	95	96	102	64	87	1.8	1.6	1.8	1.7	1.9

Section III: Two Year PLDK

Group II: Regular C

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
15	1	77	96	74	102	74	-.17	77	95	80	70
		86	106	92	108	94	1.42	107	106	105	82
		97	114	112			.59	102	95	105	92
16	2	81	70	59	45	42	-3.00	51	38	53	42
		89	83	76	61	47	-1.99	73	95	80	59
		90	73	68			-1.61	76	65	66	70
17	2	69	84	59	72	48	-2.29	56	55	66	39
		78	89	70	80	55	-1.66	66	57	75	70
		100	74	76			-2.43	77	60	104	78
18	2	79	90	72	36	36	-2.41	62	53	44	59
		88	99	88	73	57	-1.55	67	62	62	78
		99	97	98			-2.13	79	65	57	82
19	1	91	67	63	78	68	-3.00	58	62	80	50
		100	73	75	67	57	-.65	85	60	105	82
		123	66	82			-2.07	80	85	105	73
20	1	82	105	86	108	94	-1.33	69	57	105	63
		91	93	86	90	82	-.43	88	68	66	82
		96	92	90			.59	102	106	87	92
21	1	69	82	58	36	35	-3.00	48	53	44	42
		78	90	71	100	71	.08	81	65	94	73
		90	81	75			-1.29	79	71	80	73
22	2	77	90	70	65	45	-1.79	66	60	66	70
		86	99	86	93	76	.79	94	51	70	92
		98	92	92			.05	93	95	80	87
23	1	78	90	71	67	52	-2.41	62	53	53	66
		87	88	78	77	61	-.92	73	55	87	87
		109	88	98			-.08	102	85	94	82
24	2	75	68	53	26	32	-3.00	51	38	80	30
		84	76	66	57	45	-1.33	69	74	49	56
		95	73	72			-2.53	69	57	57	73

Section III: Two Year PLDK

Group III: Regular G

1	1	74	85	64	100	71	.89	79	53	87	63
		82	92	76	95	78	.07	84	85	105	92
		95	106	102			.05	93	90	94	92

11	12	13	14	15	16	17	18	19	20	21	22
82	76	42	73	102	58	89	2.2	2.3	2.5	2.1	
90	107	70	91	102	108	66	3.3	3.4	3.7	3.3	4.2
82	107	88	96	102	72	92					
69	38	42	37	102	47	81	2.0	1.8	2.3	2.0	
61	107	70	37	94	76	83	2.6	2.8	2.1	2.1	2.3
90	107	70	55	102	64	91					
78	42	60	33	61	68	74	1.9	2.2	1.9	1.5	
99	53	70	28	75	76	57	1.9	2.6	2.0	2.2	2.3
86	76	104	78	84	68	77					
86	38	65	46	75	101	74	1.9	2.5	2.5	2.2	
90	72	50	33	88	68	83	2.7	4.3	3.3	3.1	3.8
99	79	76	64	94	108	87					
44	72	46	37	61	61	40	2.1	1.7	2.2	1.7	
99	88	104	78	102	108	58	2.1	1.8	1.8	2.0	1.9
48	107	82	60	75	81	88					
61	107	50	46	102	68	60	1.9	2.2	2.6	2.2	
78	107	104	37	102	108	66	1.7	2.0	2.1	2.3	2.3
94	107	82	96	102	88	91					
65	31	30	28	58	64	88	1.8	1.7	2.0	1.6	
52	107	104	51	102	108	64	1.9	1.7	2.0	1.7	1.3
73	83	65	69	102	76	84					
52	83	65	55	71	68	91	1.8	1.9	2.2	1.8	
73	107	104	87	102	108	73	2.2	2.5	2.8	2.6	3.6
86	107	82	78	102	88	91					
56	64	60	37	102	52	67	1.7	1.7	2.1	1.9	
86	68	76	37	94	101	62	1.6	1.6	1.8	2.5	1.4
86	107	82	55	102	101	81					
65	57	30	55	84	44	45	2.2	1.8	2.2	3.5	
52	83	55	82	102	64	33	2.2	3.4	2.0	2.1	3.2
69	107	42	60	102	55	71					

52	107	104	69	102	68	93	1.3	1.5	1.5	1.7	
82	72	104	78	79	81	78	1.8	1.7	1.2	2.3	2.0
65	107	104	100	84	88	83					

Section III: Two Year PLDK

Group III: Regular G (cont.)

Subject / Variables	Sex	1	2	3	4	5	6	7	8	9	10
2	1	78	86	68	83	66	-3.00	55	55	66	53
		86	82	72	97	80	-1.06	72	71	75	78
		99	78	80			.11	94	90	105	87
3	2	71	86	62	80	55	-.70	66	60	75	59
		79	95	76	91	74	-.36	75	71	75	78
		91	104	96			.54	101	65	105	82
4	2	72	80	59	63	44	-1.61	60	55	66	47
		79	98	78	99	82	2.57	107	106	105	82
		93	113	106			-.32	89	42	80	99
5	1	80	94	76	97	70	-.54	75	62	105	78
		87	105	92	99	82	.16	85	62	94	82
		99	93	94			-.27	99	74	105	92
6	2	74	127	92	112	84	.55	76	85	66	82
		82	128	104	122	109	1.60	112	81	94	108
		99	138	138			1.48	112	106	75	99
7	2	82	78	66	79	63	-3.00	55	62	53	63
		89	79	72	100	84	-2.74	67	71	80	66
		101	93	96			-1.71	83	85	94	78
8	1	81	85	70	87	64	-.61	76	60	105	63
		88	92	82	106	91	-1.77	74	65	75	82
		101	83	86			-1.35	86	95	94	87
9	2	90	77	71	88	80	-2.74	67	57	75	70
		98	77	78	86	78	-1.77	74	77	66	78
		110	69	78			-1.83	82	71	80	82
10	1	72	96	69	100	70	.21	73	62	55	73
		80	97	78	95	78	1.01	87	95	80	78
		92	92	86			-.11	91	106	105	92
11	1	88	84	76	97	80	-2.58	68	65	94	66
		95	88	86	98	94	.48	100	77	105	99
		107	91	100			-.57	95	71	105	87
12	1	79	93	74	97	80	-1.91	65	55	70	73
		88	96	86	104	89	-.97	82	65	75	82
		106	84	92			-.57	95	106	80	87
13	1	83	79	66	75	59	-2.27	61	65	49	56
		92	83	78	74	84	-2.74	67	74	57	70
		103	75	80			-2.91	73	68	49	70
14	2	75	82	63	78	54	-3.00	54	53	44	42
		83	73	63	75	59	-2.46	60	68	80	66
		95	70	69			-1.54	77	65	87	73
15	1	91	80	75	83	74	-1.51	77	106	87	92
		99	105	106	100	96	.43	99	106	87	73
		111	102	116			.82	112	90	94	108

11	12	13	14	15	16	17	18	19	20	21	22
56	53	42	55	45	64	43					
61	88	60	60	67	94	75	1.6	1.5	1.6	1.7	2.7
90	107	104	87	75	76	72	3.0	2.5	2.6	3.0	
52	83	70	55	94	58	84					
78	83	65	55	102	68	61	1.7	1.8	1.7	1.6	2.5
99	107	104	78	102	81	73	2.2	2.6	2.5	2.0	
73	53	60	51	102	47	63					
111	64	88	91	102	76	83	1.9	1.7	1.9	1.1	3.2
94	107	95	82	102	88	79	3.0	4.3	3.4	2.8	
86	83	88	73	71	50	68					
78	107	104	91	84	72	69	1.9	1.8	1.8	2.1	3.4
99	107	95	96	84	88	90	3.3	1.8	4.4	3.5	
65	64	88	87	75	81	91					
111	107	88	109	75	108	71	2.2	2.2	2.1	1.7	2.6
107	107	104	105	102	108	88	2.6	2.7	3.8	3.7	
27	76	65	55	37	55	81					
48	79	104	55	61	55	65	1.6	1.5	1.4	1.2	1.1
86	107	104	69	67	72	75	1.9	1.6	1.8	1.6	
82	76	88	69	102	64	66					
61	68	104	78	88	72	71	1.7	1.8	1.4	1.8	1.9
90	76	55	73	102	81	71	2.2	1.7	1.8	1.8	
52	107	88	60	52	68	65					
82	83	104	33	75	81	63	1.7	1.8	1.4	1.9	2.6
99	88	70	73	75	108	74	2.1	2.4	2.2	2.1	
82	88	104	51	61	72	68					
111	107	104	51	84	68	71	1.6	1.5	1.5	1.2	1.9
99	107	95	73	71	72	63	1.5	1.5	2.3	2.0	
65	68	70	64	67	64	66					
78	107	95	73	84	88	70	1.7	1.7	2.0	2.1	1.9
86	107	88	96	102	88	68	1.9	1.8	2.1	2.3	
78	83	55	46	55	72	50					
86	107	104	55	102	76	83	1.8	1.8	1.7	2.0	2.3
78	107	104	87	102	68	77	1.8	1.6	1.9	2.8	
61	72	76	28	75	61	76					
40	68	88	51	94	64	63	1.8	2.1	1.8	1.7	3.0
44	102	104	78	94	68	65	2.0	2.4	2.7	2.6	
65	53	50	73	47	58	64					
73	34	55	37	50	68	80	1.4	1.6	1.7	1.2	1.9
94	72	104	73	67	88	85	1.7	2.0	1.9	1.7	
82	68	76	78	64	58	66					
111	107	95	73	71	108	90	1.7	1.6	1.7	2.2	2.3
107	107	104	105	71	108	69	2.1	2.2	1.9	3.5	

Section III: Two Year PLDK

Group IV: Team C

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
1	1	85	63	56	33	35	-3.00	40	33	42	34
		93	68	66	57	47	-3.00	51	49	36	59
		106	73	80			-3.00	60	55	66	63
2	1	94	77	75	83	74	-1.88	73	71	94	66
		102	84	88	72	70	-.81	92	57	105	99
		114	96	112			-1.29	87	65	105	82
3	1	88	73	66	83	66	-3.00	56	60	75	66
		96	92	90	85	76	-2.10	12	65	75	108
		108	90	100			-1.23	88	90	94	87
4	2	88	61	56	44	41	-3.00	44	42	53	34
		97	78	78	59	48	-3.00	57	46	75	56
		109	64	72			-3.00	58	60	62	66
5	1	80	72	60	67	52	-2.35	62	57	66	44
		88	77	70	77	61	-2.20	71	71	57	78
		101	83	86			-1.17	88	106	75	87
6	1	84	65	52	59	34	-3.00	54	49	66	39
		91	84	78	79	70	-2.58	68	57	36	70
		104	70	75			-3.00	66	60	44	66
7	2	70	73	53	38	36	-2.29	56	60	57	59
		78	103	80	73	57	-1.61	76	62	75	78
		90	85	78			-2.43	77	46	70	82
8	2	81	53	47	18	29	-3.00	42	49	40	47
		89	68	63	57	47	-3.00	53	55	62	56
		102	64	68			-3.00	63	106	66	63
9	1	86	71	63	42	40	-3.00	51	46	70	66
		94	76	74	81	71	-1.88	73	106	94	82
		106	81	88			-3.00	70	77	57	78
10	2	82	56	49	27	32	-3.00	43	35	44	47
		90	70	65	35	37	-3.00	52	51	53	56
		102	60	64			-3.00	58	46	40	73
11	2	84	72	63	36	36	-2.86	56	62	70	63
		92	69	66	66	55	-3.00	64	65	75	87
		105	70	76			-2.97	72	106	70	92
12	2	76	87	67	70	47	-3.00	55	55	44	53
		84	83	71	102	87	-1.96	63	60	70	59
		108	77	86			-3.00	68	74	66	70
13	2	71	72	53	47	38	-3.00	44	60	57	34
		79	93	74	89	71	-2.97	58	53	70	56
		91	67	63			-3.00	63	53	87	66
14	1	69	86	60	47	38	-2.41	55	46	70	47
		77	101	78	78	54	-3.00	56	62	80	59
		89	88	80			-2.26	70	57	70	70

11	12	13	14	15	16	17	18	19	20	21	22
35	34	46	33	50	47	22					
48	68	50	28	55	58	63	1.3	1.3	1.6	1.4	
56	79	50	37	58	68	56	1.8	1.4	1.7	1.2	1.6
73	68	70	73	84	76	55	1.9	2.1	2.1	2.4	
94	79	104	78	102	94	55	1.9	2.1	2.1	2.4	
82	107	70	73	102	94	73	1.9	2.5	3.4	3.2	3.4
48	31	42	37	71	61	40					
65	83	50	37	102	72	67	2.0	2.8	2.5	2.8	
86	107	65	78	88	81	91	2.2	2.8	3.2	2.8	2.2
27	42	70	51	50	31	66					
69	49	76	37	55	58	57	1.7	2.3	2.5	1.7	
56	53	50	55	58	58	76	1.8	2.1	1.6	1.3	1.6
56	53	50	46	102	61	29					
65	93	50	46	102	61	46	1.9	2.6	2.1	2.2	
90	107	70	73	102	64	51	2.2	2.9	2.2	2.5	2.3
61	46	76	33	61	64	51					
107	72	88	37	88	68	63	1.9	2.2	2.2	1.4	
69	64	70	55	94	68	71	2.3	2.6	2.2	2.3	1.9
78	38	42	37	67	52	34					
73	83	42	69	102	68	64	2.4	2.2	2.1	2.0	
82	76	55	82	102	81	73	2.3	2.8	2.6	2.7	2.9
52	53	30	28	58	31	18					
82	49	33	37	50	50	44	1.6	1.4	1.8	1.2	
69	38	42	46	79	47	55	1.5	1.5	2.0	1.1	1.9
48	42	42	28	58	55	55					
65	72	46	46	88	68	56	1.9	2.6	2.3	1.6	
94	72	50	33	107	72	86	2.7	4.3	2.0	1.8	3.8
44	49	42	37	45	40	26					
31	49	35	42	84	55	-3.00	1.7	1.5	1.9	1.3	
48	88	38	33	88	58	60	1.7	1.3	1.7	1.0	1.3
44	57	60	37	52	52	21					
44	64	76	42	52	81	67	2.0	2.6	2.3	2.2	
65	68	104	46	67	61	81	2.4	3.2	2.6	2.7	3.4
94	53	30	37	61	64	72					
69	76	60	37	61	76	65	1.9	2.4	2.2	2.3	
56	88	65	78	55	68	74	2.2	2.6	2.4	2.8	2.0
27	42	35	42	61	31	9					
40	68	60	42	64	68	38	1.2	1.2	1.1	1.0	
86	53	50	51	71	58	52	1.5	1.4	2.0	1.0	1.0
82	68	38	42	64	44	67					
78	68	46	46	94	31	58	1.0	1.0	1.0	1.0	
82	83	60	51	102	68	69	1.8	1.5	1.9	1.7	1.4

Section III: Two Year PLDK

Group IV: Team C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
15	1	74	84	63	76	52	-.87	65	53	94	63
		82	105	86	95	78	-.70	75	106	75	70
		94	92	88			-.86	83	106	75	99
16	2	71	80	58	72	48	-1.84	59	65	62	56
		78	91	72	71	55	-2.04	65	55	80	63
		90	85	78			-1.34	78	68	87	73
17	1	78	87	69	77	61	.39	81	74	70	78
		86	109	94	93	76	.25	86	106	49	99
		99	107	108			.58	112	90	75	108
18	2	76	77	60	57	54	-3.00	57	55	49	66
		84	85	73	63	48	-1.91	64	60	49	63
		96	83	82			-1.29	79	57	75	87
19	1	73	83	62	76	52	-1.72	60	57	80	44
		81	92	75	97	80	-.23	76	68	57	73
		94	96	92			.70	104	106	80	87
20	2	75	93	60	106	78	-1.97	64	57	53	66
		84	104	88	91	74	.29	87	62	75	92
		96	92	90			.43	99	106	94	92
21	1	71	102	72	72	48	-1.67	60	60	75	39
		79	87	70	85	68	-1.75	66	53	87	59
		92	83	78			-1.56	76	71	87	82
22	1	72	80	59	106	78	-1.21	63	57	70	70
		81	93	76	112	98	-.60	73	77	94	87
		93	97	92			-.38	88	106	75	99
23	2	72	72	54	47	38	-3.00	40	42	32	32
		80	81	66	59	46	-2.04	64	74	53	56
		93	74	71			-3.00	61	53	57	56
24	2	76	77	60	95	68	-2.78	60	51	62	66
		85	93	80	89	71	-.56	77	74	66	82
		98	104	104			-.81	84	85	57	108
25	1	73	71	54	43	37	-2.98	51	53	57	39
		81	85	70	73	57	-2.91	59	51	87	47
		94	79	76			-2.80	66	53	80	66
26	2	71	85	61	36	35	-.99	64	77	62	42
		79	90	72	100	84	.64	84	55	75	73
		92	89	84			-.16	91	74	75	78
27	2	87	73	66	61	47	-2.50	59	59	70	44
		95	76	74	81	71	-2.80	66	55	66	73
		108	66	74			-2.55	76	106	87	82
28	1	82	93	77	106	91	-.20	81	106	105	87
		90	94	86	102	98	.70	104	106	80	99
		103	106	112			-.93	91	90	105	108

11	12	13	14	15	16	17	18	19	20	21	22
52	53	55	55	102	72	44					
65	107	70	55	75	68	88	1.3	1.5	1.6	1.0	
56	107	60	64	102	64	76	1.9	2.0	2.1	2.2	1.3
69	42	55	37	71	61	49					
94	42	33	51	102	51	62	1.4	1.2	1.5	1.2	
103	83	65	46	102	58	68	1.9	1.4	1.9	1.8	1.0
56	107	104	73	75	94	74					
61	107	104	82	79	72	82	2.2	2.8	1.9	2.0	
86	107	104	105	84	108	93	3.7	3.9	3.5	3.0	4.4
82	57	46	28	67	52	32					
86	79	46	51	71	68	59	1.6	1.5	1.9	1.2	
103	107	46	51	102	72	77	2.4	3.0	3.0	2.1	2.3
61	46	70	51	102	40	62					
103	76	104	64	84	76	64	1.4	1.2	1.6	1.1	
111	107	76	78	102	81	75	2.0	2.0	1.9	2.0	2.1
56	72	88	55	71	68	70					
78	107	104	78	84	108	82	2.5	1.8	1.7	1.4	
86	107	82	64	102	108	92	2.1	4.3	3.2	2.4	3.6
73	31	65	46	94	64	47					
69	57	82	73	71	61	62	1.5	1.7	1.7	1.4	
78	107	76	28	102	81	79	1.9	1.7	2.1	2.0	1.3
69	61	82	51	58	58	46					
48	72	95	69	64	64	65	1.6	1.4	1.9	1.2	
111	79	104	87	75	72	55	1.8	2.2	1.9	2.0	2.4
61	38	38	28	45	52	42					
86	68	46	37	67	76	62	1.4	1.4	1.7	1.0	
78	64	50	28	102	61	55	1.5	1.6	1.8	1.4	2.4
69	38	38	64	94	58	17					
103	68	55	78	102	72	64	1.8	1.7	2.0	1.3	
78	102	50	82	102	72	72	3.2	4.3	3.4	2.7	4.7
56	53	70	42	47	50	60					
52	64	82	42	58	61	63	1.4	1.5	1.7	1.0	
78	93	88	51	75	40	70	1.9	1.9	2.1	2.1	2.2
52	49	55	55	102	64	62					
69	107	104	64	102	64	63	2.0	2.0	1.8	2.2	
73	83	104	69	102	108	84	2.7	4.3	3.2	2.5	3.6
69	53	42	46	71	72	26					
86	64	42	67	67	81	45	1.3	1.4	1.6	1.2	
44	88	44	87	67	81	60	1.7	1.9	1.7	1.6	2.1
52	79	65	82	102	55	59					
94	107	88	60	102	108	63	1.6	1.4	1.9	2.0	
56	107	82	100	102	72	92	1.9	2.2	1.8	2.4	2.1

Section III: Two Year PLDK

Group IV: Team C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
29	1	70	91	65	100	71	-.87	65	49	62	66
		78	108	84	97	80	-.04	78	81	75	78
		104	80	84			-.87	91	77	105	92
30	2	72	82	60	72	48	-3.00	49	42	49	59
		81	86	71	67	52	-1.41	68	60	87	70
		93	85	81			-1.94	73	85	49	70
31	2	74	93	69	102	74	.04	72	62	66	70
		82	107	88	87	70	-.29	80	77	87	87
		95	99	96			.70	105	90	70	92
32	2	75	78	60	38	36	-1.84	59	51	49	53
		84	85	73	69	54	-.70	75	74	70	63
		97	86	86			.22	96	85	66	82
33	2	70	89	63	95	68	-1.04	64	51	62	53
		79	117	92	95	78	-.17	77	71	87	82
		90	112	102			.86	107	106	87	87

Section III: Two Year PLDK

Group V: Team G

1	1	70	108	75	95	68	-.76	66	77	53	73
		78	105	82	108	94	1.82	96	90	87	92
		90	117	106			-.05	92	85	87	92
2	1	74	82	62	76	52	-1.55	61	51	66	59
		82	89	74	87	70	-.48	74	53	75	82
		94	105	100			.43	99	81	94	99
3	1	73	79	59	47	38	-2.35	55	51	44	44
		83	83	70	77	61	-3.00	54	57	40	50
		93	87	83			-1.34	78	106	75	82
4	1	72	76	56	85	59	-2.52	54	49	57	37
		79	82	66	85	68	-.98	71	53	105	53
		92	87	82			-1.61	76	55	80	92
5	2	70	81	58	85	59	-1.67	60	53	105	59
		78	83	66	77	61	-1.48	67	55	87	66
		91	90	84			-1.40	78	77	105	73
6	2	83	70	60	59	46	-2.05	63	55	80	70
		91	70	66	55	46	-3.00	65	65	53	78
		90	85	78			-2.85	66	57	75	70

11	12	13	14	15	16	17	18	19	20	21	22
65	79	70	73	75	61	50					
73	79	82	69	79	94	62	1.6	1.7	1.6	1.4	
86	107	82	100	102	72	78	2.2	2.1	2.1	2.2	2.1
52	38	35	46	55	55	60					
56	72	55	64	67	94	56	1.7	1.5	1.5	2.1	
73	107	82	64	64	72	90	2.5	2.8	2.3	1.5	3.0
82	68	95	64	102	52	60					
90	68	104	78	88	61	76	1.7	1.4	1.8	1.6	
86	107	104	109	102	81	90	1.8	2.1	2.2	2.5	2.1
65	61	50	55	88	58	57					
90	88	70	55	102	68	68	2.1	1.5	1.6	1.4	
99	107	76	82	102	81	82	2.2	2.2	1.9	1.7	2.1
56	79	76	69	79	68	70					
73	64	95	82	75	81	92					
90	107	104	96	102	76	92	3.2	4.3	4.4	2.8	4.7

69	61	46	64	102	40	77					
86	93	104	78	102	76	63	1.5	1.3	1.3	1.2	
86	107	104	87	102	72	71	1.9	2.6	2.4	2.3	2.1
65	49	50	51	94	68	93					
94	88	82	60	102	72	77	1.5	1.4	1.5	1.4	
82	107	95	96	94	108	88	1.8	1.7	1.6	2.5	2.0
44	46	76	60	84	52	65					
52	61	55	60	55	47	71	1.2	1.4	1.0	1.0	
69	83	70	55	102	68	86	1.8	2.5	1.8	2.0	2.9
61	57	70	33	84	50	55					
82	107	88	33	84	76	69	1.4	1.4	1.7	1.2	
90	107	76	46	88	68	70	1.5	2.3	1.9	1.9	1.9
65	42	76	51	61	52	42					
86	107	95	42	50	55	60	1.5	1.4	1.6	1.0	
65	107	104	51	67	72	75	1.8	1.7	1.9	1.0	1.6
40	53	46	51	102	58	70					
86	72	46	51	61	58	62	1.3	1.4	1.5	1.0	
86	68	55	55	79	55	68	1.7	1.6	2.0	1.5	2.0

Section III: Two Year PLDK

Group V: Team G (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
7	2	75	77	59	55	41	-1.95	58	62	75	59
		83	89	75	79	63	-.07	82	62	66	78
		95	91	88			-1.34	78	55	94	73
8	2	76	80	62	47	38	-1.61	60	49	70	70
		84	81	70	67	52	-.70	75	74	80	78
		95	76	74			-1.77	74	55	80	82
9	1	77	84	66	108	80	-1.60	67	57	75	73
		85	85	74	102	87	.52	90	62	105	92
		97	97	96			-.16	91	71	94	108
10	2	74	55	44	36	35	-3.00	51	46	53	39
		82	76	64	91	74	-2.09	63	69	94	70
		93	87	83			-2.74	67	60	62	56
11	2	75	71	55	59	43	-2.22	63	81	53	53
		83	95	80	44	41	-1.24	70	74	70	66
		96	94	92			-.97	82	81	80	82
12	1	74	97	72	100	71	-.99	64	55	70	42
		82	92	76	93	76	-1.19	71	95	49	78
		94	98	94			-1.77	74	60	87	73
13	1	77	96	74	65	50	-.79	72	85	80	70
		85	83	72	77	61	-.38	79	57	70	78
		98	94	94			-1.56	76	53	80	82
14	2	77	90	70	87	61	-2.16	63	62	80	66
		85	87	75	91	74	-2.00	64	55	70	82
		98	86	86			-.70	85	106	94	92
15	1	77	71	57	87	61	-3.00	57	95	75	42
		85	79	69	100	84	-2.23	62	62	87	66
		98	86	86			-1.67	75	71	87	70
16	2	78	89	70	81	64	-1.60	67	49	87	59
		86	109	94	99	82	-.70	75	65	70	82
		99	101	102			-.27	99	85	80	92
17	2	72	71	53	67	46	-1.38	62	53	94	63
		80	86	70	87	70	-.54	74	68	80	73
		93	89	85			-1.13	80	71	53	78

Section III: Two Year PLDK

Group VI: Volunteer C

1	1	77	73	58	87	61	-2.78	60	57	94	44
		84	84	72	97	80	-.97	73	68	80	59
		108	68	76			-2.79	74	57	87	73

11	12	13	14	15	16	17	18	19	20	21	22
69	53	46	37	64	50	65					
86	107	60	73	102	81	83	1.8	1.9	1.9	1.4	
44	107	60	82	84	108	76	2.5	3.2	2.5	2.3	2.5
44	64	50	60	84	55	91					
78	83	65	82	84	61	57	1.1	1.1	1.6	1.0	
78	72	88	82	102	61	80	2.2	1.7	1.9	1.4	1.0
56	76	70	73	64	68	85					
73	107	104	82	102	81	69	1.6	2.1	2.0	1.3	
61	107	104	105	84	72	75	3.0	3.9	2.4	2.5	3.8
56	49	42	46	64	52	70					
69	53	76	33	50	64	84	1.3	1.2	1.1	1.0	
73	88	82	64	75	55	80	1.7	2.6	1.9	1.8	2.4
44	64	82	69	50	76	57					
86	93	76	51	55	68	65	1.6	1.6	1.7	1.8	
78	107	95	78	64	88	85	1.8	2.6	2.4	2.1	2.0
99	57	55	55	94	68	82					
61	61	55	78	102	68	76	1.6	1.2	1.6	1.8	
86	83	76	87	67	68	87	2.4	2.2	1.9	2.6	2.0
90	61	88	37	75	72	44					
52	68	82	55	102	61	55	1.4	1.6	1.5	1.1	
56	107	104	64	102	72	72	2.2	1.9	1.9	2.0	1.9
61	61	65	55	61	61	57					
69	61	42	55	71	72	66	1.7	1.6	1.4	1.6	
82	88	104	78	75	64	68	1.9	2.4	1.9	2.3	2.1
52	42	65	37	52	50	35					
61	38	70	46	64	61	58	1.6	1.7	2.1	2.4	
86	76	95	64	79	68	70	2.1	3.2	2.2	2.2	3.8
73	57	70	55	102	76	79					
86	72	104	78	67	76	65	2.4	2.3	2.5	3.9	
73	107	104	73	102	88	73	1.9	2.6	1.9	2.2	2.3
73	76	60	64	61	33	73					
35	83	104	78	75	72	85	1.9	2.0	2.3	1.8	
61	107	104	82	84	94	91	2.8	2.7	2.1	2.4	3.4

52	76	65	42	55	61	48					
94	76	95	42	88	72	56	1.3	1.2	1.0	1.0	
69	107	82	28	75	81	74	1.7	1.6	2.1	1.6	1.0

Section III: Two Year PLDK

Group VI: Volunteer C (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
2	2	73	71	54	63	44	-2.81	52	46	49	59
		79	94	75	73	57	-2.96	62	53	75	70
		93	74	71			-2.31	70	68	70	78
3	2	79	109	86	99	82	.27	80	85	94	87
		87	120	104	104	89	1.15	101	106	70	87
		99	95	96			.94	112	106	75	92
4	1	72	77	57	89	61	-3.00	46	33	80	37
		78	71	59	73	57	-3.00	62	71	75	47
		93	72	69			-1.83	74	55	105	66
5	2	77	83	65	30	33	-3.00	56	53	49	53
		86	79	70	73	57	-2.50	59	51	62	63
		97	89	88			-1.34	78	71	49	87
6	2	78	90	71	106	78	-1.27	63	65	80	73
		85	115	98	95	78	-.07	82	57	80	87
		97	101	100			.91	109	74	87	108
7	1	72	86	63	85	59	-.59	67	71	70	78
		80	93	75	77	61	1.01	87	85	105	82
		92	103	96			.00	93	74	80	87
8	2	69	112	76	91	64	-.47	68	53	87	73
		77	121	92	115	87	1.82	96	68	66	82
		89	123	110			.43	99	77	87	87
9	1	72	97	69	102	74	-1.38	62	60	75	53
		78	97	76	100	84	-1.02	81	81	94	78
		90	103	94			-1.18	80	60	80	108
10	1	86	77	68	89	71	-1.33	69	57	87	66
		94	87	84	85	76	-.70	85	90	80	87
		106	86	94			-.63	94	77	105	82
11	1	83	79	67	83	66	-1.60	67	57	49	59
		97	86	86	66	55	-1.88	73	55	66	63
		110	78	88			-1.59	84	81	105	82

Section III: Two Year PLDK

Group VII: Volunteer G

1	1	80	66	55	59	47	-3.00	50	33	75	42
		88	69	63	77	61	-3.00	61	62	70	47
		100	69	71			-2.55	76	62	80	87

11	12	13	14	15	16	17	18	19	20	21	22
52	57	76	42	50	47	62					
65	61	65	51	61	61	61	1.4	1.4	1.5	1.0	
78	53	76	60	71	88	79	1.8	1.7	1.8	1.1	1.0
73	76	70	91	94	64	77					
107	107	104	109	79	72	69	2.4	2.2	1.4	2.8	
107	107	104	114	102	108	92	3.5	3.4	3.7	3.9	4.0
40	27	76	42	61	40	44					
65	88	55	33	61	58	69	1.1	1.1	1.4	1.0	
99	107	70	42	67	72	52	1.1	1.3	1.9	1.3	1.0
69	49	46	46	75	64	29					
56	72	60	51	52	68	57	1.3	1.2	1.3	1.2	
103	83	60	82	102	68	68	2.0	1.7	2.2	2.4	2.1
56	46	46	64	67	61	81					
65	93	104	100	102	58	70	1.6	1.7	1.6	1.7	
107	107	88	100	102	108	66	3.0	3.2	4.0	3.0	3.6
90	34	65	64	84	55	50					
111	88	95	91	75	64	35	1.4	1.6	1.2	1.3	
90	107	82	82	102	101	71	2.2	2.2	2.4	1.8	2.1
78	61	60	64	79	72	80					
99	107	104	91	102	108	64	1.5	1.7	1.8	2.4	
111	88	104	96	102	101	86	3.0	3.4	3.2	2.3	4.2
52	57	70	64	79	47	84					
73	76	82	96	88	76	83	1.2	1.3	1.3	1.0	
78	107	76	91	94	61	91	1.4	1.3	1.5	1.6	1.0
86	61	65	37	102	64	38					
73	107	95	37	102	108	61	1.3	1.2	1.6	1.7	
99	88	88	64	102	108	77	1.7	1.7	1.8	2.5	1.1
56	76	82	78	71	88	74					
90	76	65	69	102	88	65	1.6	1.4	1.5	1.2	
94	57	70	82	102	94	58	1.7	1.6	1.9	2.2	1.6

40	38	60	51	58	64	21					
56	68	88	42	67	55	55	1.3	1.2	1.5	1.0	
90	107	104	55	61	68	80	1.7	1.9	1.5	1.5	1.0

Section III: Two Year PLDK

Group VII: Volunteer G (cont.)

Subject / Variables

	Sex	1	2	3	4	5	6	7	8	9	10
2	1	72	106	76	102	74	1.01	80	81	70	73
		80	129	102	112	98	1.45	91	106	70	87
		92	107	100			.81	106	95	75	108
3	2	79	93	74	104	89	.39	81	57	87	70
		87	110	96	106	91	.52	90	81	94	87
		99	103	104			.22	107	85	105	87
4	2	90	78	72	60	50	-2.63	67	57	87	59
		97	77	77	74	64	-3.00	65	68	36	66
		110	64	73			-2.07	80	65	70	87
5	1	74	87	65	82	57	-2.46	55	53	75	59
		82	94	78	77	61	-2.69	67	81	75	78
		94	92	88			-1.08	81	90	94	66
6	2	72	88	64	29	32	-2.01	58	81	44	44
		80	86	70	38	37	-2.10	64	51	66	66
		93	86	82			-1.56	76	60	53	82
7	1	75	93	70	93	66	-.25	69	51	75	59
		95	83	81	99	82	-.61	76	60	80	73
		95	101	98			.22	96	85	80	92
8	1	69	86	60	70	47	-1.84	59	55	66	56
		77	104	80	100	84	-.17	77	77	80	73
		90	103	94			.27	97	90	94	108

11	12	13	14	15	16	17	18	19	20	21	22
86	83	104	73	79	72	72					
86	83	104	100	67	108	75	1.4	1.5	1.6	1.8	
103	107	104	109	75	94	90	2.4	3.0	2.2	3.3	2.5
99	64	104	87	102	72	68					
90	76	104	82	102	68	76	1.7	1.6	1.6	1.2	
94	107	104	87	102	81	84	3.2	3.6	2.7	3.5	2.6
52	88	55	60	102	64	61					
73	64	42	60	94	76	76	1.3	1.3	1.2	1.0	
90	107	76	51	102	64	92	1.5	1.3	2.1	1.6	1.0
65	38	65	37	55	47	76					
48	61	65	37	88	68	62	1.5	1.4	1.7	1.0	
78	107	70	69	84	88	59	1.8	1.7	1.9	1.6	1.0
61	57	46	51	71	52	30					
52	79	70	37	79	76	72	1.2	1.3	1.2	1.4	
99	107	82	73	75	81	53	2.5	2.6	2.7	2.2	3.2
73	57	70	73	102	94	73					
73	72	104	64	79	101	63	1.7	1.6	1.6	1.3	
78	107	104	82	102	108	88	2.6	3.4	3.2	3.8	3.8
56	61	38	55	84	55	36					
90	72	95	60	67	94	57	1.1	1.1	1.6	1.7	
86	107	76	96	102	101	64	1.8	2.6	2.5	2.8	2.9